UniVerse

User Reference

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Preface

This manual is a guide to the resources available in the UniVerse environment. It presents the UniVerse commands and keywords in an alphabetical listing for easy reference.

Organization of This Manual

This manual contains the following:

Chapter 1 is an alphabetical listing and description of UniVerse commands.

Chapter 2 is an alphabetical listing and description of UniVerse keywords that modify UniVerse commands.

Chapter 3 is an alphabetical listing and description of UniVerse user records defined in the VOC file.

Chapter 4 is an alphabetical listing and description of local and system files used by UniVerse processes.

Appendix A is a quick reference for UniVerse commands grouped according to use.

Documentation Conventions

This manual uses the following conventions:

Convention	Usage
Bold	In syntax, bold indicates commands, function names, keywords, and options that must be input exactly as shown. In text, bold indicates keys to press, function names, and menu selections.
UPPERCASE	In syntax, uppercase indicates UniVerse commands, keywords, and options; BASIC statements and functions; SQL statements and keywords; and ProVerb commands. In text, uppercase also indicates UniVerse identifiers such as filenames, account names, schema names, and record IDs.

Convention	Usage
Italic	In syntax, italic indicates information that you supply. In text, italic also indicates operating system commands and options, filenames, and pathnames.
`Courier`	Courier indicates examples of source code and system output.
`Courier Bold`	In examples, courier bold indicates characters that the user types or keys the user presses (for example, **`<Return>`**).
[ ]	Brackets enclose optional items. Do not type the brackets unless indicated.
{ }	Braces enclose nonoptional items from which you must select at least one. Do not type the braces.
itemA | itemB	A vertical bar separating items indicates that you can choose only one item. Do not type the vertical bar.
...	Three periods indicate that more of the same type of item can optionally follow.
➤	A right arrow between menu options indicates you should choose each option in sequence. For example, "Choose **File ➤ Exit**" means you should choose **File** from the menu bar, then choose **Exit** from the File pull-down menu.
`I`	Item mark. For example, the item mark (**`I`**) in the following string delimits elements 1 and 2, and elements 3 and 4: `1I2F3I4v5`
`F`	Field mark. For example, the field mark (**`F`**) in the following string delimits elements FLD1 and VAL1: `FLD1FVAL1vSUBV1sSUBV2`
`v`	Value mark. For example, the value mark (**`v`**) in the following string delimits elements VAL1 and SUBV1: `FLD1FVAL1vSUBV1sSUBV2`
`s`	Subvalue mark. For example, the subvalue mark (**`s`**) in the following string delimits elements SUBV1 and SUBV2: `FLD1FVAL1vSUBV1sSUBV2`
`T`	Text mark. For example, the text mark (**`T`**) in the following string delimits elements 4 and 5: `1F2s3v4T5`

The following conventions are also used:

- Syntax definitions and examples are indented for ease in reading.
- All punctuation marks included in the syntax—for example, commas, parentheses, or quotation marks—are required unless otherwise indicated.
- Syntax lines that do not fit on one line in this manual are continued on subsequent lines. The continuation lines are indented. When entering syntax, type the entire syntax entry, including the continuation lines, on the same input line.

UniVerse Documentation

UniVerse documentation includes the following:

UniVerse BASIC Programmer's Guide: This guide contains fundamental information about the UniVerse BASIC language, including data types, variables, operators, debugger commands, and conversion codes. This book is for experienced programmers.

UniVerse BASIC Reference: This two-volume manual contains reference pages for all UniVerse BASIC statements and functions, with complete syntax details. This book is for experienced programmers.

UniVerse BASIC SQL Client Interface Guide: This guide describes how to use the BASIC SQL Client Interface, which provides a programming and a user interface for UniVerse clients to access local or remote UniVerse database servers, and non-UniVerse database servers such as ORACLE, SYBASE, and INFORMIX. This book is for experienced SQL programmers.

Administering UniVerse from UNIX: This manual covers tasks performed by UniVerse Administrators using UNIX shell commands, the UniVerse System Administration menus on UNIX systems, or both. It describes such tasks as system startup and shutdown, system configuration and maintenance, system security, and peripheral maintenance.

Administering UniVerse from Windows: This manual covers tasks performed by UniVerse Administrators using the UniVerse Admin client program on a Windows system. It describes such tasks as maintaining and transferring UniVerse accounts, maintaining peripherals, backing up and restoring files, and managing file and record locks, network services, and transaction logging.

UniVerse Transaction Logging and Recovery: This manual describes the UniVerse transaction logging subsystem, including both transaction and warmstart logging and recovery. This book is for system administrators.

UniVerse System Description: This manual provides detailed and advanced information about UniVerse features and capabilities for experienced users. It describes how to use UniVerse commands, work in a UniVerse environment, create a UniVerse database, and maintain UniVerse files.

UniVerse User Reference: This manual contains reference pages for all UniVerse commands, keywords, and user records, allowing experienced users to refer to syntax details quickly.

Guide to RetrieVe: This guide describes RetrieVe, the UniVerse query language that lets users select, sort, process, and display data in UniVerse files. This book is for users who are familiar with UniVerse.

Guide to ProVerb: This guide is for application developers who want to use the ProVerb processor to create prestored procedures called procs. It describes tasks such as relational data testing, arithmetic processing, and transfers to subroutines. It also includes reference pages for all ProVerb commands.

Guide to the UniVerse Editor: This guide describes in detail how to use the Editor, allowing users to modify UniVerse files or programs. It also includes reference pages for all UniVerse Editor commands.

UniVerse SQL Administration for DBAs: This manual is for database administrators (DBAs) who are familiar with UniVerse. It describes tasks typically performed by DBAs, such as maintaining database integrity and security, and creating and modifying databases.

UniVerse SQL User Guide: This guide is for application developers who are familiar with UniVerse and want to use SQL functionality in their UniVerse applications.

UniVerse SQL Reference: This manual contains reference pages for all SQL statements and keywords, allowing experienced SQL users to refer to syntax details quickly. It includes the complete UniVerse SQL grammar in Backus Naur Form (BNF).

UniVerse Master Index: This book is a comprehensive index for UniVerse documentation.

UniVerse Quick Reference: This manual is a quick reference to all UniVerse commands and keywords. It also summarizes UniVerse SQL statements and keywords, all elements of the UniVerse BASIC language, Editor commands, ProVerb commands, file types, file dictionaries, and user exits.

Related Documentation

The following documentation is also available:

UniVerse Guide for Pick Users: This guide describes UniVerse for new UniVerse users familiar with Pick-based systems.

Moving to UniVerse from PI/open: This manual describes how to prepare the PI/open environment before converting PI/open applications to run under UniVerse. It includes step-by-step procedures for converting INFO/BASIC programs, accounts, and files. This book is for experienced PI/open users and does not assume detailed knowledge of UniVerse.

UniVerse GCI Guide: This guide describes how to use the General Calling Interface (GCI) to call subroutines written in C, C++, or FORTRAN from BASIC programs. It is for experienced programmers who are familiar with UniVerse.

UniVerse ICI Guide: This guide describes how to use the Integrated Calling Interface (ICI) to access UniVerse from external programs. It is for experienced programmers who are familiar with UniVerse.

UV/Net II Guide: This guide describes UV/Net II, the UniVerse transparent database networking facility that lets users access UniVerse files on remote systems. It is for experienced UniVerse administrators.

UV/Term Guide: This guide gives step-by-step instructions for how to install the UV/Term software, how to define terminal parameters, and how to start up and use UV/Term. It also describes the emulator window and how to use it to configure a graphical user interface.

Accessing UniVerse from UNIFACE: This guide describes how to access a UniVerse database from a UNIFACE application. It is for experienced UNIFACE application developers who are new to UniVerse.

UniVerse Call Interface Guide: This guide describes how to use the UniVerse Call Interface (UCI) to write C-based client programs that use SQL function calls to access UniVerse databases. This book is for experienced SQL programmers.

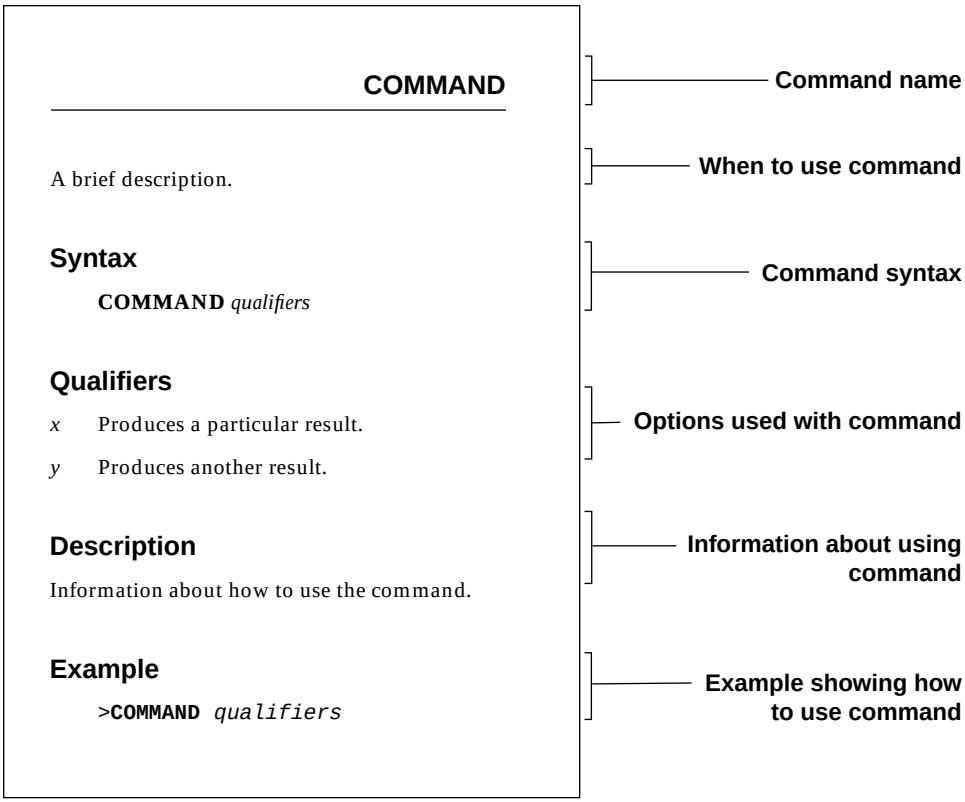
1

UniVerse Commands

This chapter describes every command in the IDEAL UniVerse flavor VOC file. The commands are arranged in alphabetical order.

The term UniVerse Administrator refers to either a UNIX superuser or a Windows NT Administrator.

The following sample shows a typical command reference page.



.A

Use .A (Append) to add text to the end of a sentence in the sentence stack.

Syntax

.A [*n*] *text*

Qualifiers

n The line number of the sentence in the stack you want to append text to. If you do not include the line number, *text* is appended to sentence 1.

text Any text that you want to add to a sentence. Text is appended to the specified sentence immediately after the last nonblank in the sentence. If you want the text separated from the original sentence by a blank, put at least two blanks before *text*.

Description

The .A command does not execute the newly created sentence. It just changes the sentence in the sentence stack. You can execute the changed sentence, or you can save it using sentence stack commands.

Example

Sentence 1 in the stack is as follows:

```
01 LIST PAYABLES WITH PYMT.DATE >= 1/1/95
```

Add the following text. Notice that there are two spaces before AND.

```
>.A  AND AMT.PD < 10
```

The new sentence now looks like this:

```
01 LIST PAYABLES WITH PYMT.DATE >= 1/1/95 AND AMT.PD < 10
```

Use .C (Change) to change a sentence in the sentence stack. This command is useful if you make a mistake typing the original sentence or if you want to execute a sentence that is only partially different from the original sentence.

Syntax

.C [*n*] */string1/string2* [/ [**G**]]

Qualifiers

n Specifies the line number of the sentence in the stack where text is to be changed. If you do not include the line number, the text in sentence 1 is changed.

string1 The sequence of characters you want to change in the original sentence.

string2 The string of characters that you want to replace *string1*. If *string2* is an empty string, *string1* is deleted from the original sentence.

/ A delimiter put before *string1*, *string2*, and the optional G. The delimiter can be any of the following, but you must be consistent within a single command (see the examples):

!	@	#	$	%	&	*
/	\	:	=	+	–	?
(	)	{	}	[	]	
`	’	.	|	"	,	

G Changes every occurrence of *string1* in the sentence to *string2*. If you do not specify G, only the first occurrence of *string1* is changed.

Description

The .C command does not execute the newly created sentence. You execute or save the changed sentence using sentence stack commands.

Example

Sentence 1 in the stack is as follows:

```
01 LIST PAYABLES WITH PYMT.DATE >= 1/1/95
```

To change the month to November, enter the following:

```
>.C:1/1/95:11/1/95:
```

Notice that colons delimit the old and new dates because the dates contain slashes. The new sentence is as follows:

```
01 LIST PAYABLES WITH PYMT.DATE >= 11/1/95
```

Use .D (Delete) to delete a sentence from the sentence stack or to delete a sentence or paragraph from the VOC file.

Syntax

.D [*n* | *name*]

Qualifiers

n Specifies the line number of the sentence in the stack is to be deleted. If you do not include the line number, sentence 1 is deleted.

name The name of the VOC file entry for the sentence or paragraph you want to delete. If the VOC file entry is not a sentence or paragraph name, the .D command issues an error message and does not delete the entry.

Description

Before deleting a stored sentence or paragraph, you can examine the contents of the sentence or paragraph using the .L (List) command.

Example

There are two sentences in the stack:

```
>.L
02 LIST PAYABLES WITH PYMT.DATE >= 1/1/95
01 LIST PAYABLES WITH PYMT.DATE >= 12/1/94
```

Delete sentence 01 by entering the following:

```
>.D
```

The stack now contains this sentence:

```
01 LIST PAYABLES WITH PYMT.DATE >= 1/1/95
```

.I

Use .I (Insert) to insert a new sentence into the sentence stack. This feature is useful for building paragraphs because you can add a sentence to those already in the sentence stack.

Syntax

.I [*n*] *text*

Qualifiers

n Specifies the number of the new sentence in the sentence stack. The sentence numbers greater than or equal to *n* increase by one. If you do not include the sentence number, the sentence is inserted as sentence 1.

text The sentence you want to insert in the sentence stack.

Example

The existing stack contains the following:

```
02 LIST PAYABLES WITH PYMT.DATE >= 1/1/95
01 LIST PAYABLES WITH PYMT.DATE >= 12/1/94
```

Insert the following:

```
>.I2 LIST PAYABLES WITH AMT.DUE > 100
```

The new stack looks like this:

```
03 LIST PAYABLES WITH PYMT.DATE >= 1/1/95
02 LIST PAYABLES WITH AMT.DUE > 100
01 LIST PAYABLES WITH PYMT.DATE >= 12/1/94
```

Use .L (List) to list the sentences in the sentence stack or to list the contents of a VOC file entry.

Syntax

.L [*n* | *name*]

Qualifiers

n The number of sentences to display. The number can be from 1 through 99.

name The name of any VOC file entry to be displayed. This command is useful for verifying the contents of a sentence or paragraph before executing it.

Description

If you do not specify *n*, sentences 1 through 20 are displayed. If you choose a number greater than 22, the first 23 sentences are displayed followed by the message:

```
Press any key to continue...
```

When you press any key but **Q**, the next 23 sentences are displayed. This continues until all the sentences you requested have been displayed, or until you press **Q** to quit.

Examples

To list the three most recent sentences, enter the following:

```
>.L3
03 LIST PAYABLES WITH PYMT.DATE >= 1/1/95
02 LIST PAYABLES WITH AMT.DUE > 100
01 LIST PAYABLES WITH PYMT.DATE >= 12/1/94
```

To list the contents of a stored sentence called MONTH, enter the following:

```
>.L MONTH

   MONTH
001 S
002 LIST PAYABLES WITH PYMT.DATE >= 12/1/94
```

.R

Use .R (Recall) to recall a sentence in the sentence stack or a sentence or paragraph stored in the VOC file.

Syntax

.R [*n* | *name*]

Qualifiers

n Specifies the line number of the sentence to recall. The number can be from 1 through 99. If you do not include a number, sentence 1 is redisplayed.

name The name of the sentence or paragraph. The named sentence or paragraph is inserted in the sentence stack.

Description

When you recall a sentence, you copy it to sentence 1 in the sentence stack. When you recall a paragraph, you copy the sentences in the paragraph to the first *n* sentences in the sentence stack, where *n* is the number of sentences in the paragraph.

The .R command does not execute the newly created sentence. It just changes the sentence in the sentence stack. You can execute the changed sentence or you can save it using sentence stack commands.

If you want to change a stored sentence or paragraph before executing it, use .R to insert the sentence or paragraph into the sentence stack. Once the sentence or paragraph is in the sentence stack, you can use any of the sentence stack commands to change it before executing it.

Examples

The existing stack looks like this:

```
03 LIST PAYABLES WITH PYMT.DATE >= 1/1/95
02 LIST PAYABLES WITH AMT.DUE > 100
01 LIST PAYABLES WITH PYMT.DATE >= 12/1/94
```

To recall sentence 3, enter the following:

```
>.R3
```

The stack looks like this:

```
04 LIST PAYABLES WITH PYMT.DATE >= 1/1/95
03 LIST PAYABLES WITH AMT.DUE > 100
02 LIST PAYABLES WITH PYMT.DATE >= 12/1/94
01 LIST PAYABLES WITH PYMT.DATE >= 1/1/95
```

To recall a stored sentence named LISTME, enter the following:

```
>.R LISTME
```

The stack now looks like this:

```
05 LIST PAYABLES WITH PYMT.DATE >= 1/1/95
04 LIST PAYABLES WITH AMT.DUE > 100
03 LIST PAYABLES WITH PYMT.DATE >= 12/1/94
02 LIST PAYABLES WITH PYMT.DATE >= 1/1/95
01 STATUS ME
```

.S

Use .S (Save) to save a sentence or paragraph as an entry in the VOC file.

Syntax

.S *name* [*start* [*end*]]

Qualifiers

name The name of the entry in the VOC file. When you later execute or recall the sentence or paragraph, use this name.

start The number of the first sentence you want to save. If you do not specify *start*, sentence 1 is saved.

end The number of the last sentence you want to save. When you specify *end*, all sentences from *start* through *end* are saved as a paragraph. If *end* is the same as *start*, just that sentence is saved.

Description

You can specify *start* and *end* either in ascending or in descending order. The .S command always saves a range of sentences in descending order from oldest to newest.

If a VOC entry with the same name and a type of sentence or paragraph already exists, the .S command displays this prompt:

```
Enter Option: O)Overwrite, N)Choose a New Name, A)Abort?
```

Enter the letter **O** to overwrite the VOC entry, enter **N** to rename the new VOC entry, or enter **A** to abort the .S command. If the VOC entry exists and is a type other than sentence or paragraph, the .S command issues an error message and prompts you for a new name.

Example

The existing stack looks like this:

```
05 LIST PAYABLES WITH PYMT.DATE >= 1/1/95
04 SELECT PAYABLES WITH AMT.DUE > 100
03 LIST PAYABLES WITH PYMT.DATE >= 12/1/94
02 LIST PAYABLES WITH PYMT.DATE >= 1/1/95
01 LIST PAYABLES WITH AMT.DUE > 10 NAME DUE.DATE
```

Save lines 4 and 3 as a paragraph called PAYMENTS.DUE by entering the following:

```
>.S PAYMENTS.DUE 4 3
```

List the paragraph PAYMENTS.DUE by entering the following:

```
>.L PAYMENTS.DUE
```

This displays the following:

```
     PAYMENTS.DUE
001 PA saved on 10:34:12 FEB 23 1995 by JONES
002 SELECT PAYABLES WITH AMT.DUE > 100
003 LIST PAYABLES WITH PYMT.DATE >= 12/1/94
```

The order of the sentences is the same in the sentence stack and the paragraph, but the numbering is different. The paragraph numbering indicates the order in which the paragraph executes the commands.

.U

Use .U (Uppercase) to convert a sentence from lowercase to uppercase.

Syntax

.U [*n*]

Qualifier

n Specifies the number of the sentence to be converted to uppercase. If you do not specify *n*, sentence 1 is converted.

Example

Sentence 4 looks like this:

```
04 select payables with amt.due > 100
```

Convert sentence 4 by entering the following:

```
>.U4
```

Now it looks like this:

```
04 SELECT PAYABLES WITH AMT.DUE > 100
```

Use .X (eXecute) to execute a sentence in the sentence stack.

Syntax

.X [*n*]

Qualifier

n Specifies the number of the sentence to be executed. If you do not specify *n*, sentence 1 is executed.

Description

When you execute a sentence other than sentence 1, the command processor first copies it to sentence 1 and then executes it.

Example

The existing stack looks like this:

```
04 SELECT PAYABLES WITH AMT.DUE > 100
03 LIST PAYABLES WITH PYMT.DATE >= 12/1/94
02 LIST PAYABLES WITH PYMT.DATE >= 1/1/95
01 LIST PAYABLES WITH AMT.DUE > 10 NAME DUE.DATE
```

Execute sentence 3 by entering the following:

```
>.X3
```

Now the stack looks like this:

```
05 SELECT PAYABLES WITH AMT.DUE > 100
04 LIST PAYABLES WITH PYMT.DATE >= 12/1/94
03 LIST PAYABLES WITH PYMT.DATE >= 1/1/95
02 LIST PAYABLES WITH AMT.DUE > 10 NAME DUE.DATE
01 LIST PAYABLES WITH PYMT.DATE >= 12/1/94
```

?

Use ? (question mark) at the end of a sentence to save the sentence in the sentence stack without executing it.

Syntax

*sentence.with.mistake***?**

Description

If you are typing a sentence and you notice you made a typing mistake before completing the sentence, you can save the sentence in the stack without executing it. Because the sentence has been saved in the sentence stack, you do not have to retype the entire sentence. Instead, you can correct the mistake using .C and then execute the sentence.

You can also use ? to enter paragraph control statements into the sentence stack before using a .S command to save the paragraph.

Example

Type **?** at the end of a sentence that contains an error:

```
>SORT PAYABLES BY VENDOR BYSTATE?
```

Change the sentence that has been saved in the sentence stack:

```
>.C/YS/Y S/
01 SORT PAYABLES BY VENDOR BY STATE
```

Execute the corrected sentence:

```
>.X
```

Use * (asterisk) in a paragraph to indicate that the following text is a comment.

Syntax

***** [*comment*]

Qualifier

comment The text of the comment.

Description

The comment does not affect the operation of the sentences in the paragraph. A comment line must contain at least one space character after the asterisk (*) to distinguish it from a cataloged BASIC program name.

You can enter comments at the UniVerse command prompt (>) as well as in paragraphs, which is helpful if you are using a COMO file and want to comment on something for later reference. For information about COMO files, see the COMO command.

You can include in-line prompts in comment lines. In-line prompts in comment lines are processed and displayed as usual. For information about in-line prompts, see the << ... >> command.

Example

This example shows a paragraph called LIST.PAYMENTS. Lines 2, 4, and 6 are comments.

```
        LIST.PAYMENTS
0001: PA
0002: * List the balances.due greater than 10
0003: BALANCES
0004: * List the most recent payment for all vendors
0005: PAYMENTS
0006: * Print a list of payments and balances
0007: PAY.REPORT
```

<< . . . >>

<< … >> denotes in-line prompting. Use in-line prompting in a paragraph to display a prompt and to request an input value when the sentence is executed. The command processor executes the sentence as if the input value had been entered instead of the in-line prompt specification. The input value can be requested from the terminal, extracted from a UniVerse file, or supplied by DATA statements in a BASIC program.

Syntax

<< [*control*,] … *text* [,*option*] >>

Qualifiers

control Specifies the characteristics of the prompt. Possible control options are as follows:

A Always prompts when the sentence containing the control option is executed. If this option is not specified, the input value from a previous execution of this prompt is used.

C*n* Uses word *n* from the command line as the input value. (The verb is word 1.)

F(*fn*,*rn* [,*fm* [,*vm* [,*sm*]]])
Finds the input value from a record (*rn*) in a file (*fn*). You must specify the file and the record. Separate them with a comma (no spaces allowed). *vm* extracts a value, and *sm* extracts a subvalue from the field (*fm*). Separate values with commas (no spaces allowed).

I*n* Takes word *n* from the command line, but prompts if word *n* was not entered.

P Saves the input value from an in-line prompt. The input value is used for all in-line prompts with the same prompt text, until the input value is overwritten by a prompt with the same prompt text and with a control option of A, C, I, or S, or until control returns to the UniVerse prompt. P saves the input value from an in-line prompt in the current paragraph or in other paragraphs.

R Repeats the prompt until the user presses **Return**.

	R(*string*)	Repeats the prompt until the user presses **Return**, and inserts *string* between each entry.
	S*n*	Takes word *n* from the command but uses the most recent command entered at the UniVerse level to execute the paragraph, rather than an argument in the paragraph. This is useful when paragraphs are nested.
	@(CLR)	Clears the screen.
	@(BELL)	Rings a bell.
	@(TOF)	Issues top of form.
	@(*col*, *row*)	Prompts at this column and row number on the terminal.
text	The prompt to be displayed.	
option	Any conversion or pattern match. Conversions are the same as the BASIC ICONV function. Patterns are the same as those used with the BASIC MATCH operator. A conversion must be in parentheses. The conversion only verifies the format of the data entered. It does not convert the data. If the data does not match the conversion, the user is prompted to reenter it.	

Description

Once a value has been entered for a particular prompt, the prompt continues to have that value until a CLEARPROMPTS command is executed if control option A is not specified. CLEARPROMPTS clears all of the values that have been entered for in-line prompts.

You can enclose prompts within prompts.

You cannot use an in-line prompt as the verb of a sentence.

Examples

Enter a value:

```
<<ENTER NAME>>
```

Enter a value and check that it is a date:

```
<<ENTER DATE,(D)>>
```

Clear the screen and prompt for AMOUNT at column 10, row 5:

```
<<@(CLR),@(10,5),AMOUNT>>
```

The following paragraph prompts for a new value each time the loop is repeated. If you omit the CLEARPROMPTS statement, the loop repeats endlessly using the value for <<ENTER MEMBERSHIP.NBR>> entered at the initial prompt.

```
      LIST.MEMBERS
0001: PA
0002: LOOP
0003: CLEARPROMPTS
0004: IF <<ENTER MEMBERSHIP.NBR>> EQ 'END' GO END:
0005: LIST SUN.MEMBER WITH @ID EQ <<ENTER MEMBERSHIP.NBR>>
0006: REPEAT
0007: END:
```

Use ABORT in a paragraph or in a BASIC EXECUTE statement to abort the current process. This is useful in conditional clauses to stop a process when certain conditions exist.

Syntax

ABORT

Example

The following paragraph, TEST, aborts when nothing is entered at the MEM.ID prompt:

```
      TEST
0001: PA
0002: LOOP
0003: CLEARPROMPTS
0004: IF <<MEM.ID>> = '' THEN ABORT
0005: LIST SUN.MEMBER <<MEM.ID>>
0006: REPEAT
```

To execute it, enter **TEST**:

```
>TEST
MEM.ID=7505
LIST SUN.MEMBER 7505 11:08:57am  20 Oct 1995  PAGE    1
MEMBER ID.    FIRST NAME    LAST NAME.     YEAR JOINED
INTERESTS......

7505          HARRY         EDWARDS        1978           SURFING
                                                          DOMINOES
                                                          VOLLEYBALL
                                                          DIVING

1 records listed.
MEM.ID=
```

ABORT.LOGIN

Use ABORT.LOGIN to abort the current process and rerun the LOGIN paragraph. This reestablishes the defaults that are set up in the LOGIN paragraph.

Syntax

ABORT.LOGIN

Example

The following BASIC program executes an ABORT.LOGIN statement to restart after an error:

```
    OPEN '', 'PAYABLES' TO FILE.PAYABLES ELSE
        PRINT 'CANNOT OPEN PAYABLES FILE'
        PRINT 'PAYABLES PROCESSING CANNOT BE COMPLETED'
        EXECUTE 'ABORT.LOGIN'
    END
    PRINT 'BEGINNING PAYABLES PROCESSING'
        .
        .
        .
    PRINT 'PAYABLES PROCESSING COMPLETED'
    STOP
END
```

Use ACCOUNT.FILE.STATS to gather file statistics on the current state of selected files. To gather statistics on a file, you must have permission to read it.

Syntax

ACCOUNT.FILE.STATS [*filenames* | **ALL** | *] [**LOCAL**]

Qualifiers

filenames	Specifies the files whose statistics you want to gather. If a select list of filenames is active, you do not need to specify *filenames*.
ALL	Specifies that statistics for all files in the account are to be gathered.
*	Same as ALL.
LOCAL	Specifies that file statistics are to be stored in a local STAT.FILE file. This file is created if it does not exist. If you do not specify LOCAL, the STAT.FILE file in the UV account is used. If the STAT.FILE does not exist, you must have write privileges to the current directory to use the LOCAL keyword.

Description

ACCOUNT.FILE.STATS writes records to the STAT.FILE file. Each file receives a unique key in the following format:

date * *time* * *seq*

date	The system date in internal format.
time	The system time in internal format.
seq	A sequential four-digit number starting with 000.
*	(Asterisk) The delimiter character.

Statistics are gathered for a file according to its file type. If the file is nonhashed (types 1, 19, and 25), the file is opened, all records are selected and read, and statistics are gathered. Nonhashed files produce the least data. If the file is a dynamic file (type 30), the ANALYZE.FILE command is issued, and the relevant statistics are written to the STAT.FILE file. If the file is a hashed file (types 2 through 18), a FILE.STAT command is issued, and the relevant statistics are written to STAT.FILE.

ACCOUNT.FILE.STATS does not clear the STAT.FILE file, nor does it display output other than error messages at the terminal. To list the file statistics in the FILE.STAT file, use the LIST.FILE.STATS command.

The time it takes to process files in an account depends on the actual number and size of the files being examined.

Use ACTLIST to activate files for transaction logging. You must be a UniVerse Administrator logged in to the UV account to use ACTLIST.

Syntax

ACTLIST *listname*

Qualifier

listname The record ID of the select list created and saved in the &SAVEDLISTS& file by the MKFILELIST command.

Description

ACTLIST activates the data file, the file dictionary, and any secondary indices for each file in the select list. ACTLIST cannot activate a type 1 or a type 19 file. It displays an error message for each type 1 or type 19 file in the select list.

Before you execute ACTLIST, the index called FILE in the UV.TRANS file must be up-to-date. If it is not, a message reminds you to rebuild the index with the BUILD.INDEX command. If for some reason the FILE index does not exist, a message tells you to create the index with the CREATE.INDEX command, and to build the index with BUILD.INDEX.

Any errors occurring during file activation appear on the terminal screen. ACTLIST does not report potential data inconsistencies due to reactivation, nor does it report inconsistencies between the header of a file and the status of the same file as recorded in UV.TRANS.

Example

This example activates all files listed in the saved list INV.FILE.LIST:

```
>ACTLIST INV.FILE.LIST
```

ANALYZE.FILE

Use ANALYZE.FILE to return information about static or dynamic hashed files.

Syntax

ANALYZE.FILE [**DICT**] [*filename* [**,***filename*]...] [**STATISTICS** | **STATS**] [**NO.PAGE**] [**LPTR** [*n*]]

Qualifiers

DICT	Specifies the file dictionary.
filename	The name of the file to be analyzed. ANALYZE.FILE can also use an active select list, in which case you need not specify *filename*.
NO.PAGE	Suppresses automatic paging.
LPTR	Sends output to the printer via logical print channel *n*.
STATISTICS	Lists additional information about dynamic files. See "Description."
STATS	Same as STATISTICS.

Description

For each dynamic file specified, a report lists the hashing algorithm, the modulo, the minimum modulus, the large record size, the group size, the split load, the merge load, the current load, the number of secondary indices, and the size of the file.

For static hashed files, the ANALYZE.FILE report is the same as the FILE.STAT report.

Using the STATISTICS Keyword. When you use the STATISTICS keyword, the report takes more time to compile. The report is listed on the screen in four pages. Press **Return** to display the pages. See the second example for details of this report.

Examples

This example analyzes the dynamic file ORDERS:

```
>ANALYZE.FILE ORDERS
File name ..................   ORDERS
Pathname ...................   ORDERS
File type ..................   DYNAMIC
Hashing Algorithm ..........   GENERAL
No. of groups (modulus) ....   16 current ( minimum 1 )
Large record size ..........   1628 bytes
Group size .................   2048 bytes
Load factors ...............   80% (split), 50% (merge) and 76%
(actual)
Total size .................   43008 bytes
>
```

The second example analyzes the same ORDERS file, using the keyword STATISTICS. The first page of the statistics report displays the progress of the data compilation. After the data is compiled, press **Return** to continue.

```
File name                               = ORDERS
File has 16 groups (each * represents 10 groups analyzed).
*
```

The second page of the statistics report includes information from the standard report as well as the total number of records, the number of large records, the number of deleted records, the total size of record data and record IDs, the unused space, and the total space for records:

```
File name ..................   ORDERS
Pathname ...................   ORDERS
File type ..................   DYNAMIC
Hashing Algorithm ..........   GENERAL
No. of groups (modulus) ....   16 current ( minimum 1, 0 empty,
                                           1 overflowed, 0 badly )
Number of records ..........   663
Large record size ..........   1628 bytes
Number of large records ....   0
Group size .................   2048 bytes
Load factors ...............   80% (split), 50% (merge) and 76%
(actual)
Total size .................   43008 bytes
Total size of record data ..   20359 bytes
Total size of record IDs ...   4553 bytes
Unused space ...............   14000 bytes
Total space for records ....   38912 bytes
```

The third page of the statistics report displays information about records and groups. For all groups, the report lists the average, minimum, maximum, and standard deviation of the number of disk records, records, large records, deleted records, data bytes, record ID bytes, unused bytes, and total bytes. For all records, the report lists the average, minimum, maximum, and standard deviation of the number of data bytes, record ID bytes, unused bytes, and total bytes.

```
    File name ..................   ORDERS
                                    Number per group ( total of 16 groups )
                                    Average    Minimum    Maximum     StdDev
    Group buffers ..............      1.06          1          2       0.24
    Records ....................     41.44         27         53       6.60
    Large records ..............      0.00          0          0       0.00
    Data bytes .................   1272.44        760       1901     285.18
    Record ID bytes ............    284.56        216        411      48.46
    Unused bytes ...............    619.00        116       1784     401.19
    Total bytes ................   2176.00       2048       4096       0.00

                                    Number per record (total of 663 records)
                                    Average    Minimum    Maximum     StdDev
    Data bytes .................     30.71         19        196      19.30
    Record ID bytes ............      6.87          1         20       3.66
    Total bytes ................     37.57         20        216      20.45
```

The last page of the report displays a histogram of the size of each record:

```
File name ..................   ORDERS
                        Histogram of record and ID lengths

                                                                    58.2%
    Bytes ---------------------------------------------------------------

  up to 4|
  up to 8|
 up to 16|
 up to 32| >>>>
```

Use *analyze.shm* as a diagnostic tool to examine information in the disk and the printer shared memory segments. Use *analyze.shm* from an operating system command prompt.

Syntax

analyze.shm { *options* }

Qualifiers

You must specify at least one option and precede each option with a hyphen. *options* are as follows:

–a [*seg#*]	(All) Lists information generated by all options. *seg#* specifies a printer memory segment. You must be a UniVerse Administrator to use the *seg#* argument.
–b	(BASIC) Lists the status of all cataloged programs currently loaded in BASIC shared memory.
–c	(Configuration) Lists currently active authorization parameters.
–d	(Dynamic) Lists the status of all active dynamic file control blocks.
–f	(File) Lists all active file locks. The UniVerse LIST.READU command also lists this information.
–g	(Group) Lists all active group locks. The UniVerse LIST.READU command also lists this information.
–l	(Logging) Lists information about the transaction logging subsystem.
–n	(Numbers) Lists raw, unformatted data for all table entries, including unused entries.
–p [*seg#*]	(Printer) Lists information about your printer memory segment. A UniVerse Administrator can use the *–p* option to list information about other users' printer memory segments. *seg#* specifies a printer memory segment.
–r	(Readu) Lists all active record locks. The UniVerse LIST.READU command also lists this information.
–s	(Semaphore) Lists the status of system semaphores. The UniVerse SEMAPHORE.STATUS command also lists this information.

–t [0] (Tunables) Lists current configurable parameter values. 0 suppresses display of the asterisk that indicates the parameter has been changed from the default.

–u (User) Lists the status of task synchronization locks. The UniVerse LIST.LOCKS command also lists this information.

–x Lists general system information not displayed by the other options.

–z Includes network licensed users, when used with *–c* and *–x*.

Description

The disk shared memory segment is a global work area that must be present for UniVerse to work. The printer shared memory segment is local to each user.

Use the ANALYZE.SHM command in the UniVerse environment to examine the disk and printer shared memory segments.

Examples

See the CONFIG command for an example of the report produced by *analyze.shm –c*.

See the LIST.LOCKS command for an example of the report produced by *analyze.shm –u*.

See the LIST.READU command for an example of the report produced by the *–f*, *–g*, and *–r* options of *analyze.shm*.

See the SEMAPHORE.STATUS command for an example of the report produced by *analyze.shm –s*.

All the examples show output from a UNIX system.

Catalog Shared Memory. The *–b* option shows the contents of catalog shared memory. This is useful when you want to see what programs reside in catalog shared memory, which programs are in use, and which are available.

```
$ analyze.shm -b

State of shared memory: 4
Number of programs loaded into shared memory: 3
Size     References  Users   Pathname
 933              0      0   /u1/uv/catdir/*gtar*GTAR.858/7.1
 895              0      0   /u1/uv/catdir/*gtar*GTAR.858/7.2
1055              0      0   /u1/gtar/PGMS.O/GTAR.9663.2
```

Printer Shared Memory. The *–p* option shows a user's printer memory segment followed by the user's segment's ID in decimal. The hexadecimal format in the output indicates the key of the segment.

If you specify the segment ID after the *analyze.shm –p* command, the ID is the shared memory key of that segment. If you do not specify the segment ID, the segment of the shared memory analysis tool is used and you see the default printer settings.

The following command displays a memory map showing used and unused sections for the user's printer shared memory segment 609. The terminal driver (BSD or SYSV) is included.

```
$ analyze.shm -p 609
```

```
Printer shared memory segment:
shared memory segment address=0xBF800000
uid of owner=703 ashley
gid of owner=700 doc
uid of creator=703 ashley
gid of creator=700 doc
access mode (in octal)=0100600
sequence number=3
shared memory segment id=609
shared memory key=0xACEB0031
size of printer segment in bytes=4096
pid of last shmop (this smat tool)=1989
pid of creator=1775
number of current attaches=2
last attach time=Fri Sep 13 10:43:51 1996
last deattach time=Thu Oct  8 10:39:14 1992
last change time=Fri Sep 13 10:38:36 1996
Pdata settings:
This machine uses a SYSV type terminal driver
fork_flag: 0
data_flag: 0
data_file: ""
term.crt.width: 79
term.crt.depth: 40
term.crt.bot_mar: 0
term.lptr.width: 132
term.lptr.depth: 66
term.lptr.bot_mar: 3
term.flag: 0
```

```
term.Pinchrs: 0 0 0 0
como_name: "U"
break_disable: 0
date_format: 0
precision: 4
echo_chan: -1
wait_mode: 1
tand_flag: 0
tand_tty: ""
cont_tty: "/dev/ttyr2"
src_set: 0
src_value: 0
err_value: 0
paging: 1
emulated_tty.mode.type: 3
emulated_tty.mode.min: 0
emulated_tty.mode.time: 0
emulated_tty.cc[CC_INTR]: 3
emulated_tty.cc[CC_QUIT]: 24
emulated_tty.cc[CC_SUSP]: -1
emulated_tty.cc[CC_DSUSP]: -1
emulated_tty.cc[CC_SWITCH]: 0
emulated_tty.cc[CC_ERASE]: 8
emulated_tty.cc[CC_WERASE]: -1
emulated_tty.cc[CC_KILL]: 11
emulated_tty.cc[CC_LNEXT]: -1
emulated_tty.cc[CC_REPRINT]: -1
emulated_tty.cc[CC_EOF]: 4
emulated_tty.cc[CC_EOL]: 0
emulated_tty.cc[CC_EOL2]: 0
emulated_tty.cc[CC_FLUSH]: -1
emulated_tty.cc[CC_START]: 17
emulated_tty.cc[CC_STOP]: 19
emulated_tty.cc[CC_LCONT]: 31
emulated_tty.cc[CC_FMC]: 30
emulated_tty.cc[CC_VMC]: 29
emulated_tty.cc[CC_SMC]: 28
emulated_tty.cc[CC_CCDEL]: 0
emulated_tty.protocol.line: 0
emulated_tty.protocol.baud: 13
emulated_tty.protocol.data: 8
emulated_tty.protocol.stop: 1
emulated_tty.protocol.outenp: TRUE
```

```
emulated_tty.protocol.outodd: FALSE
emulated_tty.protocol.inipck: FALSE
emulated_tty.protocol.inmark: FALSE
emulated_tty.protocol.inigp: TRUE
emulated_tty.protocol.strip: TRUE
emulated_tty.output.post: TRUE
emulated_tty.output.tilde: FALSE
emulated_tty.output.bg: FALSE
emulated_tty.output.cs: TRUE
emulated_tty.output.tab: TRUE
emulated_tty.carrier.local: FALSE
emulated_tty.carrier.receive: TRUE
emulated_tty.carrier.hangup: TRUE
emulated_tty.crmode.inlcr: FALSE
emulated_tty.crmode.igncr: FALSE
emulated_tty.crmode.icrnl: TRUE
emulated_tty.crmode.onlcr: 1
emulated_tty.crmode.onocr: FALSE
emulated_tty.crmode.onlret: FALSE
emulated_tty.delay.bs: FALSE
emulated_tty.delay.cr: 0
emulated_tty.delay.ff: FALSE
emulated_tty.delay.lf: 0
emulated_tty.delay.vt: FALSE
emulated_tty.delay.tab: 0
emulated_tty.delay.fill: 0
emulated_tty.echo.on: TRUE
emulated_tty.echo.erase: TRUE
emulated_tty.echo.kill: 1
emulated_tty.echo.ctrl: TRUE
emulated_tty.echo.lf: FALSE
emulated_tty.handshake.xon: TRUE
emulated_tty.handshake.startany: FALSE
emulated_tty.handshake.tandem: FALSE
emulated_tty.handshake.dtr: FALSE
emulated_tty.signals.enable: TRUE
emulated_tty.signals.flush: TRUE
emulated_tty.signals.brkkey: 1
emulated_tty.ucase.ucin: FALSE
emulated_tty.ucase.ucout: FALSE
emulated_tty.ucase.xcase: FALSE
emulated_tty.ucase.invert: TRUE
physical_tty.mode.type:  0
```

```
physical_tty.mode.min: 0
physical_tty.mode.time: 0
physical_tty.cc[CC_INTR]: 3
physical_tty.cc[CC_QUIT]: 24
physical_tty.cc[CC_SUSP]: -1
physical_tty.cc[CC_DSUSP]: -1
physical_tty.cc[CC_SWITCH]: 0
physical_tty.cc[CC_ERASE]: 8
physical_tty.cc[CC_WERASE]: -1
physical_tty.cc[CC_KILL]: 11
physical_tty.cc[CC_LNEXT]: -1
physical_tty.cc[CC_REPRINT]: -1
physical_tty.cc[CC_EOF]: 4
physical_tty.cc[CC_EOL]: 0
physical_tty.cc[CC_EOL2]: 0
physical_tty.cc[CC_FLUSH]: -1
physical_tty.cc[CC_START]: 17
physical_tty.cc[CC_STOP]: 19
physical_tty.cc[CC_LCONT]: -1
physical_tty.cc[CC_FMC]: -1
physical_tty.cc[CC_VMC]: -1
physical_tty.cc[CC_SMC]: -1
physical_tty.cc[CC_CCDEL]: -1
physical_tty.protocol.line: 0
physical_tty.protocol.baud: 13
physical_tty.protocol.data: 8
physical_tty.protocol.stop: 1
physical_tty.protocol.outenp: TRUE
physical_tty.protocol.outodd: FALSE
physical_tty.protocol.inipck: FALSE
physical_tty.protocol.inmark: FALSE
physical_tty.protocol.inigp: TRUE
physical_tty.protocol.strip: TRUE
physical_tty.output.post: TRUE
physical_tty.output.tilde: FALSE
physical_tty.output.bg: FALSE
physical_tty.output.cs: FALSE
physical_tty.output.tab: TRUE
physical_tty.carrier.local: FALSE
physical_tty.carrier.receive: TRUE
physical_tty.carrier.hangup: TRUE
physical_tty.crmode.inlcr: FALSE
physical_tty.crmode.igncr: FALSE
```

```
physical_tty.crmode.icrnl: TRUE
physical_tty.crmode.onlcr: 1
physical_tty.crmode.onocr: FALSE
physical_tty.crmode.onlret: FALSE
physical_tty.delay.bs: FALSE
physical_tty.delay.cr: 0
physical_tty.delay.ff: FALSE
physical_tty.delay.lf: 0
physical_tty.delay.vt: FALSE
physical_tty.delay.tab: 0
physical_tty.delay.fill: 0
physical_tty.echo.on: TRUE
physical_tty.echo.erase: TRUE
physical_tty.echo.kill: 1
physical_tty.echo.ctrl: FALSE
physical_tty.echo.lf: FALSE
physical_tty.handshake.xon: TRUE
physical_tty.handshake.startany: FALSE
physical_tty.handshake.tandem: FALSE
physical_tty.handshake.dtr: FALSE
physical_tty.signals.enable: TRUE
physical_tty.signals.flush: TRUE
physical_tty.signals.brkkey: 1
physical_tty.ucase.ucin: FALSE
physical_tty.ucase.ucout: FALSE
physical_tty.ucase.xcase: FALSE
physical_tty.ucase.invert: FALSE
0xBF800000           SizeBeginning of Memory Map
0xBF800000-0xBF80000C12Used
0xBF80000C-0xBF80001812Used
0xBF800018-0xBF8008742140Free
0xBF800874End of Memory Map
```

Dynamic File Table. The *–d* option shows the active dynamic file control blocks:

```
$ analyze.shm -d

Dynamic Files:
Slot #  Inode  Device Ref Count Splitload Mergeload Curmod Basemod Largerec
Filesp Nextsplit
     0  4232        5         1        19        80     50     357      256
590748       102
     1  26964     116         2        19        80     50     150      128
247476        23
```

Transaction Logging System. The *–l* option shows information about the transaction logging subsystem:

```
$ analyze.shm -l

Logging System State:                    10
Logging System, Archiving:               0
Logging System, Checkpointing:           1
Logging system, last checkpointed log:   1
Logging system, active log:              1
Logging system, user request:            0
                file flush:              0
                checkpoint daemon fatal: 0
                last log used:           0
                large record logging:    0
                log daemon pid:          0
                checkpoint daemon pid:   0
                rollforward daemon pid:  0
                last log synced:         1
                next log to checkpoint:  1
                lowest transaction id:   3
                stale transaction:       3
                semaphore id:            38600
                buffer size:             4096
                block size:              512
                previous bytes put:      0
                bytes put in log:        0
                bytes written in log:    0
                current log file size:   0
```

General System Information. The *–x* option shows general system information not shown by other options:

```
$ analyze.shm -x

General System Information:
Login count: 27
Package "-UVNET" login count: 0
Package "-GCI" login count: 0
Package "-SIMPLE" login count: 0
Package "-NEWLOOK" login count: 0
Package "-NL_SERVERS" login count: 0
Package "-JET" login count: 0
Package "-COMPUSHEET" login count: 0
Package "-FLS" login count: 0
Package "-UCI" login count: 0
Package "-UVCS" login count: 0
```

```
Base address for printer segment: 0x4475000
UniVerse home directory: /u1/uv/
Shared Catalog: 0
Logging System State:                    1
Logging System, Archiving:               0    Disk: 43   Tape: 10
Logging System, Checkpointing:           0
Logging system, last checkpointed log:   0
Logging system, active log:              0
Logging system, user request:            0
Next available transaction ID: 11137
NT service process pid: 0
NT service remote thread routine address: 0
Deadlock Daemon pid: 0
Spare7: 0
Spare8: 0
Spare9: 0
Spare10: 0
Spare11: 0
Spare12: 0
Spare13: 0
Spare14: 0
Semaphore debugging: 0
Uvnetd debugging: 0
Uvnetlicd debugging: 0
Uvnetlicd watchdog: 44
Feature6: 0
Feature7: 0
Feature8: 0
Feature9: 0
Feature10: 0
Feature11: 0
Feature12: 0
Feature13: 0
Feature14: 0
Feature15: 0
Feature16: 0
```

ANALYZE.SHM

Use ANALYZE.SHM as a diagnostic tool to examine information in the disk and the printer shared memory segments.

Syntax

ANALYZE.SHM { *options* }

Qualifiers

You must specify at least one option. Specify options in lowercase and precede them with hyphens. *options* are as follows:

–a [*seg#*]	(All) Lists information generated by all options. *seg#* specifies a printer memory segment. You must be a UniVerse Administrator to use the *seg#* argument.
–b	(BASIC) Lists the status of all cataloged programs currently loaded in BASIC shared memory.
–c	(Configuration) Lists currently active authorization parameters.
–d	(Dynamic) Lists the status of all active dynamic file control blocks.
–f	(File) Lists all active file locks. The LIST.READU command also lists this information.
–g	(Group) Lists all active group locks. The LIST.READU command also lists this information.
–l	(Logging) Lists information about the transaction logging subsystem.
–n	(Numbers) Lists raw, unformatted data for all table entries, including unused entries.
–p [*seg#*]	(Printer) Lists information about your printer memory segment. A UniVerse Administrator can use the *–p* option to list information about other users' printer memory segments. *seg#* specifies a printer memory segment.
–r	(Readu) Lists all active record locks. The LIST.READU command also lists this information.
–s	(Semaphore) Lists the status of system semaphores. The SEMAPHORE.STATUS command also lists this information.

–t [0]	(Tunables) Lists current configurable parameter values. 0 suppresses display of the asterisk that indicates the parameter has been changed from the default.
–u	(User) Lists the status of task synchronization locks. The LIST.LOCKS command also lists this information.
–x	Lists general system information not displayed by the other options.
–z	Includes network licensed users, when used with *–c* and *–x*.

Description

The disk shared memory segment is a global work area that must be present for UniVerse to work. The printer shared memory segment is local to each user.

Use the *analyze.shm* command from an operating system command prompt to examine the disk and printer shared memory segments.

Examples

See the CONFIG command for an example of the report produced by ANALYZE.SHM *–c*.

See the LIST.LOCKS command for an example of the report produced by ANALYZE.SHM *–u*.

See the LIST.READU command for an example of the report produced by the *–f*, *–g*, and *–r* options of ANALYZE.SHM.

See the SEMAPHORE.STATUS command for an example of the report produced by ANALYZE.SHM *–s*.

All the examples show output from a UNIX system.

This example shows the contents of catalog shared memory:

```
>ANALYZE.SHM -b

State of shared memory: 4
Number of programs loaded into shared memory: 3
Size     References  Users   Pathname
 933              0      0   /u1/uv/catdir/*gtar*GTAR.858/7.1
 895              0      0   /u1/uv/catdir/*gtar*GTAR.858/7.2
1055              0      0   /u1/gtar/PGMS.O/GTAR.9663.2
```

The next example shows the active dynamic file control blocks:

```
>ANALYZE.SHM -d

Dynamic Files:
Slot #  Inode  Device Ref Count Splitload Mergeload Curmod Basemod
Largerec
Filesp Nextsplit
     0  4232        5         1        19        80     50
357      256
590748       102
     1  26964     116         2        19        80     50
150      128
247476        23
```

The next example shows information about the transaction logging subsystem:

```
>ANALYZE.SHM -l

Logging System State:                    10
Logging System, Archiving:               0
Logging System, Checkpointing:           1
Logging system, last checkpointed log:   1
Logging system, active log:              1
Logging system, user request:            0
                file flush:              0
                checkpoint daemon fatal: 0
                last log used:           0
                large record logging:    0
                log daemon pid:          0
                checkpoint daemon pid:   0
                rollforward daemon pid:  0
                last log synced:         1
                next log to checkpoint:  1
                lowest transaction id:   3
                stale transaction:       3
                semaphore id:            38600
                buffer size:             4096
                block size:              512
                previous bytes put:      0
                bytes put in log:        0
                bytes written in log:    0
                current log file size:   0
```

The next example shows general system information not shown by other options:

```
>ANALYZE.SHM -x

General System Information:
Login count: 27
Package "-UVNET" login count: 0
Package "-GCI" login count: 0
Package "-SIMPLE" login count: 0
Package "-NEWLOOK" login count: 0
Package "-NL_SERVERS" login count: 0
Package "-JET" login count: 0
Package "-COMPUSHEET" login count: 0
Package "-FLS" login count: 0
Package "-UCI" login count: 0
Package "-UVCS" login count: 0
Base address for printer segment: 0x4475000
UniVerse home directory: /u1/uv/
Shared Catalog: 0
Logging System State:                    1
Logging System, Archiving:               0    Disk: 43   Tape: 10
Logging System, Checkpointing:           0
Logging system, last checkpointed log:   0
Logging system, active log:              0
Logging system, user request:            0
Next available transaction ID: 11137
NT service process pid: 0
NT service remote thread routine address: 0
Deadlock Daemon pid: 0
Spare7: 0
Spare8: 0
Spare9: 0
Spare10: 0
Spare11: 0
Spare12: 0
Spare13: 0
Spare14: 0
Semaphore debugging: 0
Uvnetd debugging: 0
Uvnetlicd debugging: 0
Uvnetlicd watchdog: 44
Feature6: 0
Feature7: 0
Feature8: 0
Feature9: 0
Feature10: 0
Feature11: 0
```

```
Feature12: 0
Feature13: 0
Feature14: 0
Feature15: 0
Feature16: 0
```

Use ASSIGN to request exclusive control of a device.

Syntax

ASSIGN *device* **TO MTU** *n* [**–WAIT**] [**BLK** *size*]

ASSIGN *device* **TO LPTR** *n* [**–WAIT**]

Qualifiers

device Specifies the device you want to assign. *device* must be the record ID of a device definition in the &DEVICE& file. The device can be a magnetic tape unit, a line printer, a file, a serial port, or any other device defined in the &DEVICE& file.

MTU *n* Specifies the logical tape unit. *n* can be a number from 0 through 7. The number of the logical tape unit is used in commands like T.REW or a BASIC statement like READT to access the assigned device.

LPTR *n* Specifies a logical print channel. *n* can be a number from 0 through 255. The logical print channel number is used in RetrieVe commands or in BASIC PRINT ON statements to access the assigned device.

–WAIT Tells the processor to queue this assignment if the device is currently assigned to another user. After the other user unassigns the device, it is assigned to you.

BLK *size* Specifies the block size of the physical tape record, in bytes. If you do not specify block size, the default block size defined in the &DEVICE& file is used.

Description

If you do not use the –WAIT option and the device you requested is assigned to another user, a message like the following appears:

```
Device 'device' is currently ASSIGNed to: User Number nn
```

If you do not assign a device before using any I/O operation that requires exclusive use of a device, a message like the following appears:

```
Magnetic tape rewind failed. No device ASSIGNed to MTU
```

Use the ASSIGN command, then repeat the operation that you attempted.

The device must be set with the proper permissions for you to assign it.

Use the UNASSIGN command to release control of a device after using the ASSIGN command.

Examples

To get control of tape drive MT1, enter the following:

```
>ASSIGN MT1 TO MTU 0 BLK 8192
```

To output to a serial printer on a serial port, enter the following:

```
>ASSIGN TTY04 TO LPTR 0
>LIST VOC LPTR
```

Use AUTOLOGOUT to enable or disable automatic logout. With AUTOLOGOUT enabled, UniVerse logs you out automatically if you have not pressed a key within a specified time.

Syntax

AUTOLOGOUT [*time*]

Qualifier

time The number of minutes that must elapse before automatic logout occurs. If you specify 0, automatic logout is disabled. If you do not specify *time*, the current status of automatic logout is displayed.

Examples

```
>AUTOLOGOUT
Automatic logout is disabled.
>AUTOLOGOUT 40
Automatic logout is set for 40 minutes.
```

AVAIL

Use AVAIL to display statistics about available disk space, including the number of bytes used, the number of bytes still available, and the percent of total disk space used.

Syntax

AVAIL [*device*]

Qualifier

device **UNIX**. The file system mounted on a system

Windows NT. The drive letter or UNC drive name on a system. If *device* is not specified for a Windows NT system, the output contains statistics for each connected drive.

Examples

UNIX. The AVAIL command executes the *df* command, which produces a report similar to this:

```
>AVAIL

Filesystem         kbytes   used     avail  capacity  Mounted on
/dev/ioc/cdisk00a  19102    14080     3110       82%           /
/dev/ioc/cdisk00c  47950    41528     1626       96%        /usr
/dev/ioc/cdisk00g  289094   238894   21290       92%         /cs
/dev/ioc/cdisk01a  19158    15172     2070       88%       /mktg
/dev/ioc/cdisk01c  48070    39426     3836       91%         /qa
/dev/ioc/cdisk01g  289094   247378   12806       95%         /rd
```

AVAIL and *df* produce this report in different formats depending on the UNIX system.

Windows NT. The AVAIL command on a system produces a report similar to this:

```
>AVAIL

Drive  Type     Total KBytes  Used KBytes %Used
a:\    floppy   No information
c:\    local    104871        92284       87%
d:\    local    946110        831105      87%
e:\    remote   1083162       1042888     96%
h:\    remote   1051705       795814      75%
```

Use BASIC to compile a BASIC program.

Syntax

BASIC *filename* [*programs* | *] [*options*]

Qualifiers

filename The name of a type 1 or type 19 file containing BASIC programs.

programs The record IDs of the programs to be compiled. You can compile more than one program at a time, but the programs must all be in the same file. If a select list is active, you need not specify *programs*.

* Specifies all programs in the file.

options can be any of the following:

+$*option* Turns on the specified $OPTIONS option. *option* can also be the name of a UniVerse flavor. See the $OPTIONS statement in for the list of options and UniVerse flavors. You must specify all options you want to turn on before the options you want to turn off.

–$*option* Turns off the specified $OPTIONS option. *option* can also be the name of a UniVerse flavor. See the $OPTIONS statement for the list of options and UniVerse flavors. You must specify all options you want to turn off after the options you want to turn on.

–I Suppresses execution of RAID or VLIST on a compiler or a BASIC program.

–L Generates a listing of the program.

–LIST Same as –L.

–X Generates a cross-reference table of statement labels and variable names used in the program.

–XREF Same as –X.

–S Generates a listing of the program and spools it directly to the printer rather than to a file.

–SPOOL Same as –S.

–T Suppresses the symbol and line number tables that are usually appended to the end of an object file for run-time error messages.

Description

The object code produced by the compiler is saved in a file with the source *filename* and the suffix .O (for example, BP.O). The record ID of the object code is the same as the record ID of the source code.

A listing produced with either the –LIST or the –XREF option is saved in a file with the source *filename* and a suffixed .L (for example, BP.L). The record ID in the listing file is the same as the record ID of the source code.

Example

This example compiles PROG1 and spools a listing of PROG1 to the printer:

```
>BASIC BP PROG1 -SPOOL
```

Use BELL to specify whether the terminal bell sounds when UniVerse generates warning messages.

Syntax

BELL { **ON** | **OFF** }

Qualifiers

ON (Default) Specifies that the terminal bell sounds.

OFF Specifies that the terminal bell does not sound.

BLOCK.PRINT

Use BLOCK.PRINT to print block characters on the printer.

Syntax

BLOCK.PRINT *string* [*string* ...]

Qualifier

string An unquoted ASCII 7-bit character string with no embedded blanks. You can print several character strings on separate lines by specifying them on the command line separated by blanks.

Description

To use BLOCK.PRINT, your account must have a VOC file entry pointing to the BLTRS file in the UV account. BLTRS contains each character that can be listed in block format. If the character is not in BLTRS, BLOCK.PRINT cannot print it. To list the characters you can print in block format, enter **SORT BLTRS** at the system prompt.

The characters that you include in the command line are printed on the printer in a block format. Each character of the string is nine lines long and between five and twenty characters wide. The width varies according to the relative width of the letter that is printed. The characters are printed as uppercase letters. The widest letters are W and M; the narrowest letter is I.

Because character width varies, the total length of the character string that is printed also varies. The length of the string depends on the letters within the string and cannot be longer than the printer's line width. If the string is too long, BLOCK.PRINT displays an error message.

To display block characters on the terminal screen, use the BLOCK.TERM command.

Example

```
>BLOCK.PRINT ABC

     AAAA        BBBBBBBBBBB      CCCCCCCCCC
    AAAAAA       BBBBBBBBBBBB    CCCCCCCCCCCC
   AAAAAAAA      BBBB     BBBB   CCCC     CCCC
  AAAA   AAAA    BBBBBBBBBBBB    CCCC     CCCC
 AAAA     AAAA   BBBBBBBBBBB     CCCC
 AAAAAAAAAAAA    BBBB     BBBB   CCCC     CCCC
 AAAAAAAAAAAA    BBBB     BBBB   CCCC     CCCC
 AAAA     AAAA   BBBBBBBBBBBB    CCCCCCCCCCCC
 AAAA     AAAA   BBBBBBBBBBB      CCCCCCCCCC
```

BLOCK.TERM

Use BLOCK.TERM to display block characters on the terminal.

Syntax

BLOCK.TERM *string* [*string* ...]

Qualifier

string An unquoted ASCII 7-bit character string with no embedded blanks. You can display several character strings on separate lines by specifying them on the command line separated by blanks.

Description

To use BLOCK.TERM, your account must have a VOC file entry pointing to the BLTRS file in the UV account. BLTRS contains each character that can be listed in block format. If the character is not in BLTRS, BLOCK.TERM cannot display it. To list the characters you can display in block format, enter **SORT BLTRS** at the system prompt.

The characters that you include in the command line are displayed on the terminal in a block format. Each character in the string is nine lines long and between five and twenty characters wide. The width varies according to the relative width of the letter that is displayed. The characters are printed as uppercase letters. The widest letters are W and M; the narrowest letter is I.

Because character width varies, the total length of the character string that is displayed also varies. The length of the string depends on the letters within the string and cannot be longer than the terminal's line width. If the string is too long, BLOCK.TERM displays an error message.

To print block characters on the printer, use the BLOCK.PRINT command.

Example

```
>BLOCK.TERM ABC

                    AAAA        BBBBBBBBBBB      CCCCCCCCCC
                   AAAAAA       BBBBBBBBBBBB    CCCCCCCCCCCC
                  AAAAAAAA      BBBB     BBBB   CCCC     CCCC
                 AAAA   AAAA    BBBBBBBBBBBB    CCCC     CCCC
                AAAA     AAAA   BBBBBBBBBBB     CCCC
                AAAAAAAAAAAA    BBBB     BBBB   CCCC     CCCC
                AAAAAAAAAAAA    BBBB     BBBB   CCCC     CCCC
                AAAA     AAAA   BBBBBBBBBBBB    CCCCCCCCCCCC
                AAAA     AAAA   BBBBBBBBBBB      CCCCCCCCCC
>
```

BREAK

Use BREAK to enable or disable the **Intr**, **Stop**, **Susp**, and **Break** keys.

Syntax

BREAK { **ON** | **OFF** }

Qualifiers

ON Enables the **Intr**, **Stop**, **Susp**, and **Break** keys.

OFF Disables the **Intr**, **Stop**, **Susp**, and **Break** keys.

Description

When these keys are disabled, typing one of them has no effect on the current process. The keys are enabled by default.

Use BUILD.INDEX to build a secondary index from a file. You must use this command to build a newly created index for a file that already contains records. To build an index on any data file, you must have write permissions on the file dictionary. To build an index on any file dictionary, you must have write permissions on the DICT.DICT file in the UV account.

Syntax

BUILD.INDEX [**DICT**] [*filename*] [*indices* | **ALL**]

Qualifiers

DICT	Specifies the file dictionary.
filename	The name of a UniVerse file for which to build a secondary index. If *filename* is not specified, BUILD.INDEX prompts for it.
indices	A list of fields in *filename* used as secondary index keys. Index names should be separated by spaces.
ALL	Specifies that all the secondary index keys in the file should be built.

Description

If you do not specify either *indices* or ALL, you are prompted to enter the name of an index.

BUILD.INDEX first removes the contents of all specified indices, then completely rebuilds the indices.

Use BUILD.INDEX after you create a new secondary index to a file that already contains records. The file is locked for use by other users during the building process.

Example

```
>BUILD.INDEX ORDERS CUST.ID

Locking 'ORDERS' file for exclusive use.
Starting SSELECT for file 'ORDERS index CUST.ID'.
Compiling "@INDEX.CUST.ID".
@Ak.0 ; splice ( @1 , ( char ( 251 ) ) , @ID )

956 record(s) selected to SELECT list #1.

Clearing Index File INDEX.000

Starting DATA processing for index 'CUST.ID'!

              956 total processed.

Updating INDEX.MAP flags...


Index build of CUST.ID complete.

File 'ORDERS' Unlocked.

>
```

Use CATALOG to catalog a BASIC program. Cataloging a program makes it available to all users or to users of one account. You must catalog a program before another BASIC program can call it as an external subroutine.

Syntax

CATALOG [*filename*] [[*catalog.name*] *program.name* | *] [*options*]

Qualifiers

filename The name of the program source code file containing the programs to be cataloged. If you do not specify *filename*, you cannot specify other qualifiers on the command line. In this case CATALOG prompts you for the qualifier values, one at a time.

catalog.name The name the program will have in the catalog. This name must be used in a CALL statement or as a verb to reference the cataloged program. If you do not specify *catalog.name*, *program.name* is the name the program will have in the catalog.

program.name The name of the program in *filename* to be cataloged. You can specify only one program name on the command line unless you enter an asterisk (*) to specify all programs in a file. CATALOG can also read from an active select list.

* Specifies all programs in *filename*.

You can specify one or more of the following *options*:

FORCE Specifies that CATALOG should overwrite any cataloged program with the same *catalog.name*.

If you do not specify FORCE and a globally cataloged program with the same name exists, CATALOG asks for permission to overwrite it.

When a normally cataloged program is cataloged, a program with the same *catalog.name* is overwritten.

Locally cataloged programs are overwritten as soon as they are recompiled.

You cannot specify FORCE at a prompt.

NOXREF — Specifies that the program should be cataloged without the cross-reference and symbol table information. This makes it difficult to use any of the UniVerse debugging tools and should be specified only after a program has been thoroughly tested.

You cannot specify NOXREF at a prompt.

LOCAL — Specifies that the program is to be cataloged in the current account instead of in the system catalog space.

You can specify the LOCAL keyword in response to the prompt for *catalog.name*.

COMPLETE — Specifies that the VOC entry for a locally cataloged program should be the absolute pathname. The VOC entry normally specifies the location of the program relative to the user's account.

Description

If you enter **CATALOG** with no options, you are prompted to enter the filename, the catalog name, and the program name. If you press **Return** at any of the prompts, CATALOG terminates without cataloging anything.

You must compile the source code before you use the CATALOG command. UniVerse assumes that the object code to be cataloged is in the corresponding object code file named *filename*.O.

There are three ways to catalog a program: locally, normally (or standard), and globally. Each method has different implications.

Cataloging Locally. Local cataloging creates a VOC entry for the program. This entry is a verb that points to the file and record containing the object code for the cataloged program. You can access a locally cataloged program only from the account in which it was cataloged, unless you copy the VOC entry for the catalog name to another account. Because cataloging a program locally only creates a VOC entry pointing to the object file, you need not recatalog the program every time you recompile it.

To catalog a program locally, specify the LOCAL keyword on the command line or enter LOCAL at the following prompt:

```
Catalog name or LOCAL =
```

Cataloging Normally. Normal cataloging copies the specified object record to the system catalog space, making it available to all users. The name of the program in the catalog is in the following format:

**account*catalog.name*

account is the name of the current account directory.

Normal cataloging also creates a VOC entry for the catalog name. This entry is a verb that contains the name **account*catalog.name* in field 2.

Because normal cataloging copies the object code to the system catalog space, you must recatalog the program every time you recompile it.

To catalog a program normally, specify a *catalog.name* that does not begin with the characters *, –, $, or !, and do not specify the keyword LOCAL.

To avoid overwriting a cataloged program with another of the same name, you can use the IAM command to change the *account* name. For example, if you catalog the following two programs normally, they are given the catalog name `*information*UPDATE`, and the most recently cataloged program overwrites the other:

```
/usr/accounts/information/BP/UPDATE
/usr/salary/information/BP/UPDATE
```

Another way to avoid conflicting catalog names is to catalog the programs with different names. This example changes the account directory name before cataloging the UPDATE program from the BP file. The example assumes the user's account is in */usr/accounts/information*.

```
>WHO
56 information
>LOGTO /usr/salary/information
>IAM salary
>WHO
56 salary From information
>CATALOG BP UPDATE
"*salary*UPDATE" cataloged.
>
```

How you call or invoke a normally cataloged program depends on your location.

- **From the account where it was cataloged:** To call the program, use the BASIC CALL statement with *catalog.name*. To invoke the program from the system prompt, enter *catalog.name* at the prompt.

- **From any other account:** To call the program, use the CALL statement with the catalog name as listed in the catalog space (i.e., **account*catalog.name*). To invoke the program from the system prompt, enter ****account*catalog.name*** at the prompt.

You can also copy the VOC entry for the catalog name from the account where the program was cataloged to another account. If you do this, you can use *catalog.name* to call or invoke the program.

Cataloging Globally. Like normal cataloging, global cataloging copies the specified object record to the system catalog space, making it available to all users. The name of the program in the catalog is in the following format:

**catalog.name*
–catalog.name
$catalog.name
!catalog.name

Global cataloging does not create a VOC entry for the catalog name. The UniVerse command processor and the run machine look in the system catalog space for verbs or external subroutines with names that have an initial *, – , $, or ! character. Because globally cataloged subroutines are accessed without a VOC entry, they are available to all accounts on the system as soon as they are cataloged.

Because global cataloging copies the object code to the system catalog space, you must recatalog the program every time you recompile it.

To catalog a program globally, specify a *catalog.name* beginning with *, –, $, or !, and do not specify the keyword LOCAL.

Examples

This example catalogs the UPDATE program normally, in the SALES account:

```
>CATALOG BP UPDATE
```

No catalog name is specified, so the program name is also the catalog name. It is listed in the catalog space as *SALES*UPDATE. From the SALES account it can be called using the name UPDATE. From any other account it can be called using the name *SALES*UPDATE.

The next example catalogs UPDATE globally as *UPDATE and automatically overwrites any existing *UPDATE without prompting:

```
>CATALOG BP *UPDATE UPDATE FORCE
```

The program is listed in the catalog as *UPDATE. Any user from any account can call this program using the name *UPDATE.

The next example catalogs UPDATE locally, setting up an entry in the VOC file called UPDATE:

```
>CATALOG BP UPDATE LOCAL
"PROG3" cataloged.
```

This is the VOC entry:

```
     UPDATE
0001 V
0002 BP.O/UPDATE
0003 B
0004 BN
0005
0006
0007
0008
0009 BP.O
```

This example shows a subroutine being cataloged:

```
>CATALOG
Catalog name or LOCAL =*TEST
File name       =BP
Program name      =TEST
"*TEST" already exists globally.
Overwriting this file may affect other users.
Do you want to overwrite the existing version? (Y/N) = N
```

CD

Use CD to compile the I-descriptors in a file dictionary before using them in a sentence. You can compile one, several, or all of the I-descriptors in the dictionary.

Syntax

CD *filename* [*descriptors*]

Qualifiers

filename The name of the UniVerse file whose dictionary entries are to be compiled. Do not specify the DICT keyword.

descriptors The names of the I-descriptors to be compiled. If you do not specify a descriptor name, all I-descriptors in the dictionary are compiled. You also can use an active select list to specify I-descriptors.

Description

CD stores the compiled object code and the time and date of the compilation in the I-descriptor record. If you change the I-descriptor expression, the Editor flags the I-descriptor and displays a reminder that the I-descriptor must be recompiled when you file the record. It invalidates the existing descriptor as well. RetrieVe compiles this I-descriptor before using it in a sentence.

Because the I-descriptors in a dictionary are often related, compile them together.

CD is a synonym for the COMPILE.DICT command.

Example

This example compiles four I-descriptors:

```
>CD ORDERS
Compiling "*A9998".
@RECCOUNT
Compiling "EXT".
QTY * ( TRANS ( BOOKS , CODE , PRICE , X ) )
Compiling "PRICE".
TRANS ( BOOKS , CODE , PRICE , X )
Compiling "TITLE".
TRANS ( BOOKS , CODE , TITLE , X )
```

Use CHAP to control execution priority.

Syntax

CHAP [**UP** | **DOWN**]

Qualifiers

UP	Specifies that you want to improve your execution priority. You must be a UniVerse Administrator to specify CHAP UP.
DOWN	Specifies that you want to lower your execution priority. DOWN is the default.

CHDIR

Use CHDIR to switch from your current UniVerse account to another UniVerse account without exiting the current process.

Syntax

CHDIR *pathname*

Qualifier

pathname The pathname of the directory that contains the UniVerse account to which you want to switch.

Description

If the account is not set up for UniVerse, the following message appears:

```
Directory account is not set up for UniVerse
```

If the account you are moving to has a LOGIN entry in its VOC file, UniVerse executes it before displaying the > prompt.

Example

This example changes your working directory to */usr/acct/demo* without leaving UniVerse:

```
>CHDIR /usr/acct/demo
```

Use CHECK.SUM to get statistical information on values in a particular field for one or more records in a file. This information includes the total number of bytes, the average number of bytes, the number of records analyzed, the checksum, and the bit count. The checksum is the result of multiplying the binary value of characters in a string by their positional value. The checksum has a high probability of being unique for a particular character string, making it useful for verifying data.

Syntax

CHECK.SUM [**DICT** | **USING** [**DICT**] *dictname*] *filename*
[*records* | **FROM** *n*] [*selection*] [*field*] [*report.qualifiers*]

Qualifiers

DICT
Checks records in the file dictionary of *filename*. If you do not specify DICT, records in the data file are checked.

USING [DICT] *dictname*
If DICT is not specified, uses *dictname* as the dictionary of *filename*. If DICT is specified, the dictionary of *dictname* is used as the dictionary of *filename*.

filename
The file whose records you want to checksum. You can specify *filename* anywhere in the sentence. CHECK.SUM uses the first word in the sentence that has a file descriptor in the VOC file as the filename.

records
Specifies the records to include. You can specify as many record IDs as you want, separated by spaces. Enclose record IDs in single quotation marks to ensure that RetrieVe does not interpret them as field names or keywords.

FROM *n*
Specifies the records whose record IDs are stored in select list *n*.

selection
A selection expression specifying the conditions that data in a record must meet for the record to be selected. A selection expression begins with the keyword WITH. For syntax details, see the WITH keyword in Chapter 2.

field
The name of the field to be checksummed. You can specify only one field. If you do not specify a field name, CHECK.SUM uses the first field specified in the @ phrase. If there is no @ phrase in the file dictionary, CHECK.SUM uses the entire record.

report.qualifiers

One or more of the following keywords:

FIRST	LPTR	ONLY	SAMPLED
ID.ONLY	NOPAGE	SAMPLE	

These keywords modify the report format. For information about them and their synonyms, see Chapter 2.

Description

The CHECK.SUM command displays output in the following format:

```
BYTE STATISTICS FOR field|filename
TOTAL = bytes AVERAGE = avg.bytes ITEMS = count CKSUM = value BITS = count
```

This message provides the following information for the records it has processed:

field	The name of the field for which the statistics are produced.
filename	The name of the file for which the statistics are produced.
bytes	The total number of bytes for values in the field.
avg.bytes	The average number of bytes of values in the field.
count	The number of records processed.
value	The checksum value for the field.
count	The bit count of the values in the field.

The field mark value is calculated in the statistics.

Examples

This example lists field statistics for all values in the field ZIP in the file SUN.MEMBER:

```
>CHECK.SUM SUN.MEMBER ZIP

Byte statistics for ZIP:
Total = 78 Average = 6 Items = 13 Cksum = 30020 Bits = 307
```

The next example lists statistics for the value in the field ZIP in record 7100:

```
>CHECK.SUM SUN.MEMBER ZIP "7100"

Byte statistics for ZIP:
Total = 6 Average = 6 Items = 1 Cksum = 2311 Bits = 23
```

CLEAN.ACCOUNT

Use CLEAN.ACCOUNT to perform routine system maintenance or to clear up suspected problems with the files in your account.

Syntax

CLEAN.ACCOUNT

Description

CLEAN.ACCOUNT looks in your account for specific system files and asks your permission to delete or clear the contents of these files. CLEAN.ACCOUNT also examines all the files in your account to verify that they are valid UniVerse files.

&TEMP& **File.** CLEAN.ACCOUNT looks for the file &TEMP&. This file is created by certain UniVerse commands that need a temporary file to store records. After you examine the records stored in &TEMP&, the file is usually no longer needed. If this file exists in your account, CLEAN.ACCOUNT asks if you want to delete it. Answer yes (**Y**) to delete the &TEMP& file.

&PH& **File.** CLEAN.ACCOUNT looks for the &PH& file. The PHANTOM command creates this file and uses it to store records containing data about each execution of the PHANTOM command. If you use the PHANTOM command often, this file can contain a large number of records. If this file exists, CLEAN.ACCOUNT asks if you want to clear this file. Answer yes (**Y**) to delete all the records in the &PH& file.

&SAVEDLISTS& **File.** CLEAN.ACCOUNT looks at the &SAVEDLISTS& file and deletes any records that begin with an ampersand (&). These records are temporary records, such as the temporary saved lists created by VVOC. A user's command stack history is also stored as a record in this file with a record ID that begins with an ampersand. After running CLEAN.ACCOUNT, the &SAVEDLISTS& file normally contains only lists created with the SAVE.LIST command.

UniVerse Files in Your Account Directory. CLEAN.ACCOUNT examines all the files in your account. For each file definition in the VOC file, CLEAN.ACCOUNT verifies that the files defined by the VOC record actually exist. If the file does not exist, an error message indicates the fact. CLEAN.ACCOUNT asks if you want to remove the pathname from field 2 of the VOC entry. If you answer yes (**Y**), the pathname in the VOC entry is set to an empty string. If the

fields for the dictionary and the data file are set to empty strings in the VOC entry, the VOC entry is also deleted from the VOC file.

UniVerse Files in Other Account Directories. CLEAN.ACCOUNT looks at file definitions in the VOC file that use a pathname to point to files defined in other accounts. If the file does not exist, CLEAN.ACCOUNT asks if you want to remove the pathname from the file definition record. If you answer yes (**Y**), the pathname in the file definition record is set to an empty string. If the fields for the dictionary and the data file are set to empty strings in the VOC entry, the VOC entry is also deleted from the VOC file.

Files in Your Account Directory. CLEAN.ACCOUNT examines any files in your account directory that do not have a valid file definition in the VOC file. For any valid UniVerse file, CLEAN.ACCOUNT puts a file definition in the VOC file. A message appears indicating that a new file definition was added to the VOC file for the files. The names of any non-UniVerse files in your account are displayed with a message indicating that the files exist in your account but are not valid UniVerse files.

Example

```
>CLEAN.ACCOUNT
Do you wish to clear the file "&PH&" (Y/N) ? Y
Now clearing file "&PH&".
File "&PH&" has been cleared.

Now selecting all the File definition records in your VOC file.

Now selecting all the operating system files in your directory.

Now processing the VOC file definition records selected.

Processing file definition record  "NEWACC"
Processing file definition record  "ACCOUNTS"
Processing file definition record  "PAYABLES"
Processing file definition record  "SUN.MEMBERS"
Processing file definition record  "VOC"
Processing file definition record  "BP.O"
Processing file definition record  "BP"
>
```

CLEAR.FILE

Use CLEAR.FILE to remove all records from a file.

Syntax

CLEAR.FILE [**DICT** | **DATA**] [*filename*]

Qualifiers

DICT Specifies that you want to clear the file dictionary. If you don't specify DICT, the data file is cleared.

DATA Specifies that you want to clear the data file specified by *filename*. DATA is the default.

filename Specifies the name of the file to be cleared. If you do not specify *filename* and there is no active select list, CLEAR.FILE prompts for the filename. If you do not specify *filename* and there is an active select list, CLEAR.FILE clears the files named by the select list. If you specify *filename* and there is an active select list, CLEAR.FILE clears *filename* and the files named in the select list.

Description

If you use a select list with CLEAR.FILE, the files named in the select list must be defined in the VOC file. If *filename* specifies a VOC entry that is a file synonym or a remote file entry, CLEAR.FILE clears the file specified in that VOC entry.

Once the CLEAR.FILE process has begun, you cannot interrupt it by pressing the **Break** key.

CLEAR.FILE does not remove the file itself. To remove the file, use DELETE.FILE.

Examples

This example clears the data file PAYABLES:

```
>CLEAR.FILE PAYABLES
File "PAYABLES" has been cleared.
```

The next example clears the dictionary of PAYABLES:

```
>CLEAR.FILE DICT PAYABLES
File "DICT PAYABLES" has been cleared.
```

Use CLEAR.LOCKS to release either a specified task synchronization lock or all task synchronization locks that were set by your task. UniVerse has 64 semaphores called task synchronization locks that synchronize multiple processes running at the same time in the same account or in different accounts.

Syntax

CLEAR.LOCKS [*n*]

Qualifier

n The number of the lock you want to release. If you do not specify a lock number, CLEAR.LOCKS clears all the locks set by your task.

Description

Before using CLEAR.LOCKS, be sure you know how the locks have been set for your installation. Consult your UniVerse Administrator if you are not sure. If you release a lock that should be retained, you might damage the data. CLEAR.LOCKS does not check the current execution status of a lock. It verifies only that your task set the lock.

Example

In this example the user first sets lock 5 with the LOCK command. The LIST.LOCKS report shows that user 34 set lock 5.

```
>LOCK 5
>LIST.LOCKS
 0:-----  1:-----  2:-----  3:-----  4:-----  5:34     6:-----  7:-----
 8:-----  9:----- 10:----- 11:----- 12:----- 13:----- 14:----- 15:-----
16:----- 17:----- 18:----- 19:----- 20:----- 21:----- 22:----- 23:-----
24:----- 25:----- 26:----- 27:----- 28:----- 29:----- 30:----- 31:-----
32:----- 33:----- 34:----- 35:----- 36:----- 37:----- 38:----- 39:-----
40:----- 41:----- 42:----- 43:----- 44:----- 45:----- 46:----- 47:-----
48:----- 49:----- 50:----- 51:----- 52:----- 53:----- 54:----- 55:-----
56:----- 57:----- 58:----- 59:----- 60:----- 61:----- 62:----- 63:-----
```

Next, lock 5 is cleared:

```
>CLEAR.LOCKS 5
Cleared LOCK number 5.
>LIST.LOCKS
 0:-----  1:-----  2:-----  3:-----  4:-----  5:-----  6:-----  7:-----
 8:-----  9:----- 10:----- 11:----- 12:----- 13:----- 14:----- 15:-----
16:----- 17:----- 18:----- 19:----- 20:----- 21:----- 22:----- 23:-----
24:----- 25:----- 26:----- 27:----- 28:----- 29:----- 30:----- 31:-----
32:----- 33:----- 34:----- 35:----- 36:----- 37:----- 38:----- 39:-----
40:----- 41:----- 42:----- 43:----- 44:----- 45:----- 46:----- 47:-----
48:----- 49:----- 50:----- 51:----- 52:----- 53:----- 54:----- 55:-----
56:----- 57:----- 58:----- 59:----- 60:----- 61:----- 62:----- 63:-----
```

Use CLEARCOMMON to reset the values of all the variables in the common area to zero. Variables outside the common area are unaffected.

Syntax

CLEARCOMMON

Description

The BASIC COMMON statement assigns common variables.

CLEARCOMMON sets to zero any common area variables that are not assigned.

Unnamed common variables are cleared when the UniVerse BASIC program that assigned them completes execution. All common variables are cleared when you exit UniVerse.

CLEARDATA

Use CLEARDATA to clear the data stack built either from DATA statements in a paragraph or from DATA statements in a BASIC program. The CLEARDATA command does the same thing as the BASIC CLEARDATA statement.

Syntax

CLEARDATA

Description

Use CLEARDATA when a data stack exists and a BASIC program requests input from the terminal. CLEARDATA is useful for clearing data when an error occurs in processing DATA statements.

In a BASIC program, use CLEARDATA as part of an EXECUTE statement.

When a BASIC program returns control to the command processor, the data stack is cleared.

Example

This program shows an example of the CLEARDATA command:

```
10 *
PRINT 'Enter filename':
INPUT FILE
PRINT 'Enter record id':
INPUT ID
PRINT 'Enter procedure':
INPUT PROC
OPEN '', FILE TO FILE.NAME ELSE PRINT 'CANNOT OPEN FILE':FILE
   EXECUTE 'CLEARDATA'
   GOTO 10
END
```

Use CLEARPROMPTS in a paragraph to set the value of in-line prompts to empty strings.

Syntax

CLEARPROMPTS

Description

Once a value has been entered at an in-line prompt, the prompt retains that value until a CLEARPROMPTS command is executed, unless the in-line prompt control option A is specified. CLEARPROMPTS clears all values entered for in-line prompts.

For information about in-line prompts, see the << ... >> command.

Example

The following paragraph prompts for a new value each time the loop is repeated. If the CLEARPROMPTS statement is omitted, the loop repeats endlessly using the value for <<ENTER MEMBERSHIP.NBR>> entered at the initial prompt.

```
      LIST.MEMBERS
0001: PA
0002: LOOP
0003: CLEARPROMPTS
0004: IF <<ENTER MEMBERSHIP.NBR>> EQ 'END' GO END:
0005: LIST SUN.MEMBER WITH @ID EQ <<ENTER MEMBERSHIP.NBR>>
0006: REPEAT
0007: END:
```

CLEARSELECT

Use CLEARSELECT to cancel an active select list.

Syntax

CLEARSELECT [*list#* | **ALL**]

Qualifier

list# The numbered select list you want to clear. The list number can be from 0 through 10, or it can be ALL, which clears all select lists. If you omit the list number, CLEARSELECT clears select list 0.

Description

Use CLEARSELECT when you have created an active select list and you decide you do not want to use the list. You can clear an entire select list or the unused remainder of an active select list.

Example

This example clears select list 5:

```
>SSELECT INVENTORY WITH COST > 9 TO 5

10 record(s) selected to SELECT list #5.
>CLEARSELECT 5
SELECT list number 5 cleared.
```

Use CLR to clear the screen and return the cursor to the home position. CLR is a synonym for the CS command.

Syntax

CLR

CNAME

Use CNAME to change the name of a file or to change the names of records in a file.

Syntax

CNAME *old.filename* { **TO** | **,** } *new.filename*

CNAME [**DICT**] *filename old* { **TO** | **,** } *new*

CNAME [**DICT**] *filename old***,** *new* [*old2***,** *new2*] ...

Qualifiers

DICT	Specifies the file dictionary.
filename	A name of a file. *old.filename* is the filename to be changed, *new.filename* is the new name of the file.
old	The name of the record you want to change.
new	The new name of the record.

Description

When you change a filename or record ID name, a message confirms the change.

Changing Filenames. To change the name of a file, you must specify the old filename, either the keyword TO or a comma, then the new filename.

To change the name of a data file that is one of multiple data files sharing the same file dictionary, you must use the following syntax:

CNAME *filename***,***old.datafile* **TO** *filename***,***new.datafile*

CNAME changes the record ID of the file definition in the VOC file to the new filename. It also changes the pathnames in the VOC entry in the following way:

- If the pathname in field 2 of the VOC entry is *old.filename*, CNAME changes the name of the file or directory and also changes the pathname in field 2 to *new.filename*. If the pathname in field 2 is not *old.filename*, CNAME changes nothing.
- If the pathname in field 3 of the VOC entry is D_*old.filename*, CNAME changes the filename and the pathname in field 3 to D_*new.filename*. If the pathname in field 3 is not D_*old.filename*, CNAME changes nothing.

Changing Record Names. To change record IDs in a file, specify *filename* followed by the old and new record IDs. To change the record ID of a record in the file dictionary, use the DICT keyword before filename. If you are changing just one record ID, you can specify *old* and *new* separated by either a comma or the keyword TO. If you want to change more than one record ID, separate *old* and *new* by a comma. You must separate the *old*, *new* pairs from each other with spaces.

Restrictions. You cannot use CNAME to change the name of an SQL table.

You cannot use CNAME to change the name of a part file belonging to a distributed file.

Examples

The original VOC file entry looks like this:

```
     PAYABLES
0001 F
0002 PAYABLES
0003 D_PAYABLES
```

When you enter the following command:

```
>CNAME PAYABLES TO ACCT_PAYABLES
```

the following messages appear:

```
Changed operating system file name from "PAYABLES" to "ACCT_PAYA000"
Changed operating system file name from "D_PAYABLES" to "D_ACCT_PAYA000"
Changed "PAYABLES" to "ACCT_PAYABLES" in your VOC file.
```

The new VOC file entry looks like this:

```
     ACCT_PAYABLES
0001 F
0002 ACCT_PAYA000
0003 D_ACCT_PAYA000
```

The next example changes record 1234 to 123400 in the PAYABLES file:

```
>CNAME PAYABLES 1234, 123400
```

COMO

Use COMO to start or stop copying terminal output to a record in the &COMO& file. You can also use COMO to print records from the &COMO& file, delete them from the system, or list their names.

Syntax

COMO [*action*]

Qualifiers

action can be one of the following:

ON *record* [HUSH]	Creates a COMO record and starts copying terminal output to it. HUSH suppresses terminal display. Output is copied to *record* but is not displayed on the screen. Be careful. Because prompts for input are not displayed, your program or paragraph can wait indefinitely for input.
OFF	Stops copying terminal output to the COMO record.
DELETE {*record* | *}	Deletes a COMO record. Asterisk (*) clears the &COMO& file.
LIST	Lists COMO records in your account.
SPOOL *record* [T]	Prints a COMO record on the line printer. T displays a COMO record on the screen.

Description

COMO is short for **com**mand **o**utput.

If you use COMO without any options, COMO prompts for the necessary information.

COMO records are records in a type 1 file named &COMO&. If you create a COMO record by using COMO ON, the COMO command creates an &COMO& file if one does not exist in your account. In a COMO ON statement, if you specify the name of an &COMO& record that exists, the old contents of the record are overwritten. The records produced by COMO can be quite large. Remember to delete COMO records when you no longer need them (use COMO DELETE *record*).

The TANDEM command cannot capture output directed to an &COMO& file.

Examples

In the following example, COMO is used with no options. It establishes a COMO record of the terminal session. Everything that appears on the terminal is stored in the record SESSION1 in the file &COMO& until the command COMO OFF is issued. Terminal display is on, so output appears on the screen at the same time as it is copied to the COMO record.

```
>COMO
Enter action (ON, OFF, DELETE, LIST, SPOOL, QUIT) = ON
Enter COMO file name = SESSION1
Terminal display on? (Y/N) = Y
```

The next example lists all COMO records in the &COMO& file. The COMO record SPOOLLIST is deleted, and the user is prompted for the next action. QUIT returns the user to the system prompt.

```
>COMO LIST
COMO file listing 02:22:49pm  02 Jul 1995

01 SPOOLLIST
02 FILESTATS
03 DICTVOC
Enter number of file to be selected = 1
Enter action (ON, OFF, DELETE, LIST, SPOOL, QUIT) = DELETE
COMO SPOOLLIST deleted.
Enter action (ON, OFF, DELETE, LIST, SPOOL, QUIT) = QUIT
>
```

COMPILE.DICT

Use COMPILE.DICT to compile the I-descriptors in a file dictionary before using them in a sentence. You can compile one, several, or all of the I-descriptors in the dictionary.

Syntax

COMPILE.DICT *filename* [*descriptors*]

Qualifiers

filename The name of the UniVerse file whose dictionary entries are to be compiled. Do not specify the DICT keyword.

descriptors The names of the I-descriptors to be compiled. If you do not specify a descriptor name, all I-descriptors in the dictionary are compiled. You can also use an active select list to specify I-descriptors.

Description

COMPILE.DICT stores the compiled object code and the time and date of the compilation in the I-descriptor record. If you change the I-descriptor expression, the Editor flags the I-descriptor and displays a reminder that the I-descriptor must be recompiled when you file the record. It invalidates the existing descriptor as well. RetrieVe compiles this I-descriptor before using it in a sentence. Because the I-descriptors in a dictionary are often related, they should always be compiled together.

COMPILE.DICT is a synonym for the CD command.

Example

This example compiles four I-descriptors:

```
>COMPILE.DICT ORDERS
Compiling "*A9998".
@RECCOUNT
Compiling "EXT".
QTY * ( TRANS ( BOOKS , CODE , PRICE , X ) )
Compiling "PRICE".
TRANS ( BOOKS , CODE , PRICE , X )
Compiling "TITLE".
TRANS ( BOOKS , CODE , TITLE , X )
```

Use COMPILE.DICTS to compile all the dictionaries in an account.

Syntax

COMPILE.DICTS

Description

COMPILE.DICTS runs the COMPILE.DICT command on every file in the account. The output of COMPILE.DICTS is also saved in a record of &COMO& called COMPILE.DICTS. For more information about the &COMO& file, see the COMO command.

CONFIG

Use CONFIG to display the currently active authorization parameters and current configurable parameter values.

Syntax

CONFIG [**ALL** | **BRIEF** | **DATA**]

Qualifiers

ALL	Lists the information from the BRIEF and DATA keywords.
BRIEF	(Default) Lists the license number, the licensed number of users for the system, and the license expiration date.
DATA	Lists the current values of the UniVerse configurable parameters.

Example

```
>CONFIG ALL

Configuration data for license number 24:
    User limit =  128
    Expiry date=  1/1/2001
Current tunable parameter settings:
    MFILES =  12
    WIDE0 =  0x3dc00000
    UVSPOOL=  /usr/spool/uv
    UVTEMP =  /tmp
    SCRMIN =  3
    SCRMAX =  5
    SCRSIZE=  512
    QDEPTH =  16
    HISTSTK=  99
    QSRUNSZ=  2000
    QSBRNCH=  4
    QSDEPTH=  8
    QSMXKEY=  32
    ULIMIT =  128000
    FSEMNUM=  23
    GSEMNUM=  23
    PSEMNUM=  64
    FLTABSZ=  11
    GLTABSZ=  300
    RLTABSZ=  300
    PAKTIME=  300
    QBREAK =  1
```

Use CONFIGURE.FILE to change the parameters of an existing dynamic file.

Syntax

CONFIGURE.FILE [**DICT**] [*filename*]
[*parameter* [*value*] ... | **DEFAULTS**]

Qualifiers

DICT Specifies the file dictionary.

filename The name of the dynamic file to be reconfigured.

parameter specifies new parameters for the dynamic file. Parameters not specified are unchanged. *parameter* can be any of the following:

MINIMUM.MODULUS *n*
Specifies the minimum modulo of the file. This keyword takes an integer argument greater than 1. This value is also the initial value of the modulo of the dynamic file. A minimum modulo of 1 is the default.

SPLIT.LOAD *n* Specifies the level at which the file's modulo is increased by one. SPLIT.LOAD takes a numeric argument indicating a percentage of the space allocated for the file. When the data in the file exceeds the space allocated for the file, the data in one of the groups divides equally between itself and a new group, to increase the modulo by one. The default SPLIT.LOAD is 80%.

MERGE.LOAD *n* Specifies the level at which the file's modulo is decreased by one. MERGE.LOAD takes a numeric argument indicating a percentage of the space allocated for the file. When the data in the file uses less than the space allocated for the file, the data in the last group of the file merges with another group, to decrease the modulo by one. The default MERGE.LOAD is 50%.

LARGE.RECORD *n*	Specifies the size of a record too large to be included in the primary group buffer. LARGE.RECORD takes an argument that can be specified as an integer or a percentage. Specified as an integer, the argument is the number of bytes a record must contain to be considered a large record. Specified as a percentage, the argument is a percentage of the group size. When the size of a record exceeds the value specified, CONFIGURE.FILE puts the data for the record in an overflow buffer, but puts the record ID in the primary buffer. This method of large record storage increases access speed. The default LARGE.RECORD size is 80%.
MINIMIZE.SPACE	Causes the values for the split load, merge load, and the large record size to be calculated to optimize the amount of space required by the file at the expense of access time. If you specify a value for split load, merge load, or large record size, the value you specify overrides the value calculated by MINIMIZE.SPACE.
DEFAULTS	Sets all the parameters of the specified dynamic file to the default values.

Description

Be careful when changing dynamic file parameters. The default parameters are set so most dynamic files work correctly. For some files, you can increase efficiency by changing the default file parameters.

We recommend that you back up your files

Always verify that the file's new parameters are more efficient than the old ones. Use the ANALYZE.FILE command to verify the new parameters after you change them.

You cannot use CONFIGURE.FILE to change the values of GROUP.SIZE, RECORD.SIZE, or the hashing algorithm. To change these values, use the CREATE.FILE command to create a new dynamic file with the parameters you want, then copy the contents of the old file to your newly created file using the COPY command.

Examples

This example reconfigures the file FILMS to minimize the disk space required. The MINIMIZE.SPACE option calculates new values for the split and merge loads and the large record size, and changes the values accordingly.

```
>CONFIGURE.FILE FILMS MINIMIZE.SPACE
File name                              = FILMS
Changing Split Load from 80% to 180%.
Changing Merge Load from 50% to 80%.
Changing Large Record Size from 1628 bytes to 2036 bytes.
File name                              = FILMS configured.
>
```

In the next example, the ANALYZE.FILE command lists the current parameter values of the CUSTOMERS file:

```
>ANALYZE.FILE CUSTOMERS
File name ..................   CUSTOMERS
Pathname ...................   CUSTOMERS
File type ..................   DYNAMIC
Hashing Algorithm ..........   GENERAL
No. of groups (modulus) ....   12 current ( minimum 1 )
Large record size ..........   1628 bytes
Group size .................   2048 bytes
Load factors ...............   80% (split), 50% (merge) and 61%
(actual)
Total size .................   6144 bytes
>
```

Because CUSTOMERS is expected to grow, the next example uses CONFIGURE.FILE to change the large record size and the minimum modulus:

```
>CONFIGURE.FILE CUSTOMERS LARGE.RECORD 1200 MINIMUM.MODULUS 200
File name                              = CUSTOMERS
Changing Minimum Modulus from 1 to 200.
Changing Large Record Size from 1628 bytes to 1200 bytes.
File name                              = CUSTOMERS configured.
>
```

Another ANALYZE.FILE verifies the new parameter values:

```
>ANALYZE.FILE CUSTOMERS
File name ..................   CUSTOMERS
Pathname ...................   CUSTOMERS
File type ..................   DYNAMIC
Hashing Algorithm ..........   GENERAL
No. of groups (modulus) ....   12 current ( minimum 200 )
Large record size ..........   1200 bytes
Group size .................   2048 bytes
Load factors ...............   80% (split), 50% (merge) and 61%
(actual)
Total size .................   6144 bytes
>
```

Use CONNECT to connect to a local or remote SQL server, such as another UniVerse system or an ORACLE, SYBASE, or INFORMIX system.

Syntax

CONNECT *data.source* [*option setting* [*option setting* . . .]]

Qualifiers

data.source The name of the data source to which you want to connect. The data source must be defined in the *uvodbc.config* file. If you do not enter the name of a data source, CONNECT lists all data sources in the *uvodbc.config* file.

option One of the following options to control the input format or output display:

BLOCK	PREFIX
INVERT	UVOUT
MVDISPLAY	VERBOSE
NULL	WIDTH

Specify any option by typing the word or its first letter. Each option must be followed by *setting*.

setting The new setting for the option.

The following sections describe each option and its possible settings in detail.

BLOCK Option. This option defines how input statements will be terminated. *setting* is one of the following:

ON Enables block mode. In this mode you can enter a series of SQL statements, ending each with a semicolon (;). To terminate the block of SQL statements, press **Return** immediately after an “SQL+” prompt.

OFF (Default) Disables block mode. In this mode if you type a semicolon at the end of a line of input, the SQL Client terminates your input and sends it to the data source.

string Enables block mode (see ON, described earlier). *string* must be from one to four characters. To terminate the block of SQL statements, enter *string* immediately after an “SQL+” prompt.

INVERT Option. This option lets you control case inversion for alphabetic characters you type while CONNECT is running. *setting* is one of the following:

ON — Inverts the case of all alphabetic characters you type—that is, lowercase letters change to uppercase, and uppercase letters change to lowercase. This is equivalent to setting PTERM CASE parameters to INVERT and LC-IN.

OFF — Disables case inversion. This is equivalent to setting PTERM CASE parameters to NOINVERT and LC-IN. This is the default setting for non-UniVerse data sources.

INIT — Sets case-inversion parameters to the values they had when you invoked CONNECT. This is the default setting for UniVerse data sources.

When you exit from CONNECT, case inversion for input is restored to the state it was in when you invoked CONNECT.

MVDISPLAY Option. The MVDISPLAY option defines how to display value marks in multivalued data (when connected to a UniVerse data source). For each row, multiple values in the same field are displayed on the same line, separated by value marks. *setting* is one of the following:

SPACE — Displays a value mark as a blank space.

NOCONV — Displays a value mark as CHAR(253).

char — Displays a value mark as *char* (one character).

By default, value marks are displayed as * (asterisk).

NULL Option. The NULL option defines how to display the SQL null value. *setting* is one of the following:

SPACE — Displays SQL null as a blank space.

NOCONV — Displays SQL null as CHAR(128).

string — Displays SQL null as *string*. The string can be from one to four characters. By default, null is displayed as the four-character string NULL.

PREFIX Option. The PREFIX option defines the prefix character for local commands. *setting* is any valid prefix character. The default prefix character is a period (**.**). You can use only the following characters as the prefix character:

!	exclamation point	?	question mark
@	at sign	(	left parenthesis
#	sharp sign	)	right parenthesis
$	dollar sign	{	left brace
%	percent	}	right brace
&	ampersand	[	left bracket
*	asterisk	]	right bracket
/	slash	‘	left quotation mark
\	backslash	‘	right quotation mark
:	colon	.	period
=	equal sign	|	vertical bar
+	plus sign	"	double quotation mark
–	minus sign	,	comma

UVOUT Option. The UVOUT option specifies how to handle output from SELECT commands executed on the data source. *setting* is either:

filename Stores output in *filename* on the client, then displays the output from *filename*. If the file does not exist, the CONNECT command creates it.

OFF (Default) Displays output from the data source directly on the client’s screen.

VERBOSE Option. The VERBOSE option displays extended column information and system messages. *setting* is one of the following:

ON Enables verbose mode. In this mode the name, SQL data type, precision, scale, and display size are displayed for each column’s definition when selecting data from the data source. Error messages are displayed in extended format that includes the type of call issued, status, SQLSTATE, error code generated by the data source, and the complete error text.

OFF (Default) Disables verbose mode.

WIDTH Option. The WIDTH option defines the width of display columns. *setting* is one of the following:

col#,width	Sets the width of column *col#* to *width*. Do not type a space after the comma. Specify *col#* as an asterisk (*) to set the width of all columns. *width* can be between 4 and the maximum line length allowed by your terminal. The default width for all columns is 10.
T	(Default) Truncates data that is wider than the specified *width*.
F	Folds data that is wider than the specified *width* onto multiple lines.
?	Displays the current column width settings, and tells whether data will be truncated or folded.

Description

The CONNECT command lets you submit SQL statements to a specified data source and receive results at your terminal.

While you are connected to a data source, you can type any SQL statement understood by the data source's DBMS engine, including SELECT, INSERT, UPDATE, DELETE, GRANT, and CREATE TABLE. You cannot, however, successfully control statements such as BEGIN TRANSACTION, COMMIT, and ROLLBACK when you are using CONNECT.

If you execute a stored procedure or enter a command batch with multiple SELECT statements, the results of only the first SELECT statement are returned.

UniVerse and SYBASE treat SQL identifiers and keywords case-sensitively, whereas ORACLE and INFORMIX do not. UniVerse requires you to specify all keywords in uppercase; SYBASE requires you to specify data types (char, int, float, etc.) in lowercase. In ORACLE and INFORMIX you can use either upper- or lowercase letters for these keywords.

Use CONVERT.ACCOUNT to convert a Pick or Prime INFORMATION account from its original format to a format compatible with UniVerse.

Syntax

CONVERT.ACCOUNT

Description

CONVERT.ACCOUNT invokes the account conversion menu. The menu comprises two submenus, one for converting Pick and Prime file dictionaries (including the VOC file), the other for converting BASIC programs. The dictionary conversion menu also has an option for converting REALITY procs to a proc format compatible with UniVerse.

For more information about converting Pick and Prime INFORMATION accounts, see *UniVerse Guide for Pick Users*.

CONVERT.SQL

Use CONVERT.SQL to convert a UniVerse file into a table. CONVERT.SQL adds SQL information to the data file and the file dictionary in the schema you are logged in to.

Syntax

CONVERT.SQL [*filename* [*option*] [**LPTR**]]

Qualifiers

filename Specifies the UniVerse file to be converted. The data file and the file dictionary must be in the current schema. If you do not specify *filename*, you are prompted for it.

LPTR Sends output to the printer. If you specify LPTR, you cannot edit the SQLDEF file.

option is one of the following, the effects of which are summarized in the following table:

Option	If no SQLDEF file exists...	If SQLDEF file exists...
none	Generates the SQLDEF file, lists column and association definitions, and prompts you to edit the definitions.	Asks if you want to use existing SQLDEF file or to overwrite it. If you enter **N** or press **Return**, lists column and association definitions, and prompts you to edit them. If you enter **Y**, generates a new SQLDEF file, overwriting the old one, lists column and association definitions, and prompts you to edit the definitions.
AUTO	Generates the SQLDEF file, lists column and association definitions, and creates the table.	Uses the existing SQLDEF file to list column and association definitions, and create the table.
AUTO.SAVE	Same as AUTO, and also saves the original UniVerse file as *filename*_SQLSAVE.	Same as AUTO, and also saves the original UniVerse file as *filename*_SQLSAVE.

Option	If no SQLDEF file exists...	If SQLDEF file exists...
CRTAB	Displays an error because the SQLDEF file doesn't exist.	Uses the existing SQLDEF file to create the table.
CRTAB.SAVE	Same as CRTAB.	Same as CRTAB, and also saves the original UniVerse file as *filename*_SQLSAVE.
GEN	Generates the SQLDEF file, lists column and association definitions, and prompts you to edit the definitions.	Generates a new SQLDEF file, overwriting the old one, lists column and association definitions, and prompts you to edit the definitions.
GEN.SAVE	Generates the SQLDEF file, lists column and association definitions, prompts you to edit the definitions, and saves the original UniVerse file as *filename*_SQLSAVE.	Generates a new SQLDEF file, overwriting the old one, lists column and association definitions, prompts you to edit the definitions, and saves the original UniVerse file as *filename*_SQLSAVE.
INFO	Lists D-, A-, and S-descriptors in the dictionary of *filename*.	Lists D-, A-, and S-descriptors in the dictionary of *filename*.
MVASSOC	Converts each nonassociated multivalued field into a one-column association.	Converts each nonassociated multivalued field into a one-column association.
RESTORE	Displays an error because the SQLDEF file doesn't exist.	Restores the file to its original state as a UniVerse file (if the SQLSAVE file exists).

Description

Use CONVERT.SQL to convert UniVerse files to tables without altering the data. CONVERT.SQL creates the column definitions and the default SQL permissions in the security and integrity constraints area (SICA) of the file, and updates the file dictionary and the SQL catalog.

You must be an SQL user to run CONVERT.SQL, and you must run it in an SQL schema. You must have write permission for the directory and the VOC file in the account.

Three Phases of CONVERT.SQL

CONVERT.SQL consists of three phases, one or more of which is executed depending on the command line arguments. Phase 2 (interactive editing) is executed only if you specify no option or the GEN option, without LPTR.

Phase 1, generating column and association definitions, causes the following to occur:

- Analysis of the D-, A-, S-descriptors and PH entries in the file dictionary
- Creation and display of the SQL column and association definitions in the SQLDEF file for the CREATE TABLE statement

Phase 2, editing column and association definitions, causes the interactive editing prompt to appear.

Phase 3, creating the table, causes the following to occur:

- Execution of the CREATE TABLE statement
- Addition of SICA information to the file header and updating of the SQL catalog

Generating Column and Association Definitions

The generation phase creates the SQLDEF file which contains valid SQL definitions for columns and associations of this table. (The SQLDEF file is not deleted automatically.)

Column Definitions. During this phase, CONVERT.SQL creates column definitions as follows. A maximum of 99 columns are allowed.

1. A column definition is generated for each D-, A-, and S-descriptor in the dictionary, with the following exceptions:
   - A- and S-descriptors that specify a correlative code (field 8) are ignored.
   - Descriptors whose names start with @Ak. (from a BUILD.INDEX process) are ignored.
   - Descriptors with a nonnumeric location (field 2), or with a location greater than 99, are ignored.
   - Additional column definitions are generated if sequential numbers for data fields do not exist. For example, if the dictionary contains definitions for

fields 1, 2, and 4, CONVERT.SQL also generates a column definition for column 3.

2. If the field name in the dictionary is not a valid SQL identifier, the field name is modified as follows:
   - If the first character is a lowercase letter, it is changed to uppercase.
   - If the first character is not alphabetic, it is changed to the letter *Z*.
   - If the name is longer than 18 characters, it is shortened to the first 17 characters of the original name followed by an underscore (_).
   - Characters that are not alphabetic, numeric, or underscores are changed to underscores.
   - If the SQL identifier created by the generation of column definitions duplicates an existing name in the dictionary, it is further modified by appending an underscore followed by a numeric or alphabetic character. If the identifier is longer than 16 characters, the underscore is appended to the first 16 characters.
3. An SQL data type is chosen for each column definition (see "Data Types").
4. If a field synonym exists in the dictionary, each column definition is assigned an alphabetic designator (uppercase or lowercase) appended to the field number. The primary column definition is assigned the character A; synonyms are assigned B, C, and so forth. Each column can have a maximum of 50 synonyms.

   CONVERT.SQL chooses the primary column definition in the following order:

Column definition	CONVERT.SQL
D-, A-, and S-descriptors	Chooses an existing D-descriptor as the primary definition for the field before an A-descriptor, and chooses an A-descriptor before an S-descriptor.
SQLTYPE	Prefers a definition that includes a value in the SQLTYPE field if more than one descriptor exists.
SQL definition	Prefers a definition whose field name is a valid SQL identifier if no SQLTYPE value exists.

Data Types. Each column's data type is determined by the SQLTYPE, conversion, and justification as follows:

- If the dictionary definition specifies an SQLTYPE, this is used for the data type.
- If the dictionary does not specify SQLTYPE but does specify a conversion code, the data type is determined from the conversion code as shown in the following table:

Conversion code	Generates this SQL data type
MD, ML, or MR with nonzero scale	DEC (9,*s*) where *s* is the scale determined from the conversion code
MD, ML, or MR with scale = zero or none	INT
Q	REAL
D (date), or MT (time)	INT
MB, MO, MX, or NR	INT
All others	VARCHAR

- If the dictionary does not specify SQLTYPE or conversion code, the data type is determined from the justification as follows:

Justification	Generates this SQL data type
T or none	VARCHAR
R	INT
Other	CHAR (*n*) where *n* is the field's width

Association Definitions. CONVERT.SQL creates SQL association definitions from information in the ASSOC field of the D-, A-, and S-descriptors as follows. A maximum of 49 associations are allowed.

1. ASSOC_*nn* is the name given to associations that are generated from A- or S-descriptors. *nn* is the location of the data field whose dictionary entry contains a C code in the ASSOC field.
2. If the dictionary contains a phrase whose name is the same as an association name, and the phrase contains fields whose names differ from the names of

the fields that generated the association definition, CONVERT.SQL generates a synonym. This synonym for the association definition is based on the contents of the phrase.

3. If the same field number appears in more than one association definition, CONVERT.SQL designates the duplicates as overlapping associations and eliminates the duplicates.
4. CONVERT.SQL displays this list of new column and association definitions.

Editing Column and Association Definitions

After the generation phase, you can edit the SQL column and association definitions. The following prompt appears:

```
Enter C..., D..., U..., R..., R, S, X, Q, or H for Help [R]:
```

Choose one of the following options:

C*tns/from/to*[/G]	Changes the column or association definition, replacing the string *from* by the string *to*. The backslash (\ ) can also be used as a delimiter. *t* C or empty for a column, or A for an association. *n* 1- or 2-digit column or association number. *s* Optional space.
D*tnsa*	Deletes the column synonym or association. *a* is the alphabetic synonym designator for the deletion of the column synonym.
U*tnsa*	Uses another column or association definition. *a* is the alphabetic synonym designator for the column or association to be used instead of the definition chosen by CONVERT.SQL.
R[*tn*]	Redisplays the SQL-formatted definitions for the single column or association *n*, or for all columns and associations.
S	Shows the CREATE TABLE statement.
H	Provides help on the options.
M	Provides more help on the options.

Creating the Table

After the editing phase, you can create the table. If an error occurs during this phase, the process aborts, and you can return to the editing phase for resolution. Choose one of the following options from the editing prompt (see "Editing Column and Association Definitions").

X	Executes the CREATE TABLE statement.
X.SAVE	Saves the original unconverted SQLDEF file, then executes the CREATE TABLE statement.
Q	Quits out of CONVERT.SQL and returns you to the system prompt.

Example

This example uses CONVERT.SQL to analyze the ORDERS file and generate the ORDERS_SQLDEF file with the SQL column and association definitions. The example also shows the interactive user options (DA1, S, and R) that delete the BOUGHT association definition, show the proposed CREATE TABLE statement, and redisplay the SQL definitions. The last user option (X) converts the ORDERS file to a table and returns you to the system prompt.

```
>CONVERT.SQL
Enter Filename to be converted (or <return> to Quit)? ORDERS
Analyzing 'ORDERS' for conversion to SQL                26 OCT 1995  14:16
Generating file 'ORDERS_SQLDEF' .............
Table name: ORDERS              (SQLDEF was generated  26 OCT 1995  14:16)-
Columns:
  00  ORDER.NO CHAR(5) COL.HDG 'Order No' FMT '5L'
  00B ZID INT FMT '5R'
  01  DATE INT COL.HDG 'Order Dat'' FMT '9R' CONV 'D2'
  02  CUST.NO INT COL.HDG 'Customer No' FMT '4R'
  03  PROD.NO INT MULTIVALUED COL.HDG 'Product No' FMT '3R'
  04  QTY INT MULTIVALUED COL.HDG 'Qty' FMT '4R' CONV 'MD'
Associations:
  01  BOUGHT (03 KEY, 04)
Enter C..., D..., U..., R..., R, S, X, Q, or H for Help [R]: DA1
  Association deleted
Enter C..., D..., U..., R..., R, S, X, Q, or H for Help [R]: S
CREATE EXISTING TABLE ORDERS
 (ORDER.NO CHAR(5) NOT NULL PRIMARY KEY COL.HDG 'Order No' FMT '5L',
  ZID SYNONYM FOR ORDER.NO FMT '5R',
  DATE INT COL.HDG 'Order Date' FMT '9R' CONV 'D2',
  CUST.NO INT COL.HDG 'Customer No' FMT '4R',
  PROD.NO INT MULTIVALUED COL.HDG 'Product No' FMT '3R',
  QTY INT MULTIVALUED COL.HDG 'Qty' FMT '4R' CONV 'MD');
```

```
Enter C..., D..., U..., R..., R, S, X, Q, or H for Help [R]: R
Table name: ORDERS                (SQLDEF last updated  26 OCT 1995  14:16)
Columns:
  00  ORDER.NO CHAR(5) COL.HDG 'Order No' FMT '5L'
  00B ZID INT FMT '5R'
  01  DATE INT COL.HDG 'Order Date' FMT '9R' CONV 'D2'
  02  CUST.NO INT COL.HDG 'Customer No' FMT '4R'
  03  PROD.NO INT MULTIVALUED COL.HDG 'Product No' FMT '3R'
  04  QTY INT MULTIVALUED COL.HDG 'Qty' FMT '4R' CONV 'MD'
Associations:
Enter C..., D..., U..., R..., R, S, X, Q, or H for Help [R]: X
Preparing to create table .......
Creating Table "ORDERS"
Adding Column ORDER.NO
Adding Synonym ZID
Adding Column DATE
Adding Column CUST.NO
Adding Column PROD.NO
Adding Column QTY
>
```

For more CONVERT.SQL examples, see *UniVerse SQL User Guide.*

CONVERT.VOC

Use CONVERT.VOC to convert items in a Pick Master Dictionary or records in a Prime INFORMATION VOC file to UniVerse VOC file entries.

Syntax

CONVERT.VOC

Description

When you invoke CONVERT.VOC, you are prompted to select the name of the computer or operating system from which the original Master Dictionary or VOC file came:

Computer	Operating System
ADDS	Mentor
IBM PC-XT	Pick
Microdata	Reality
Prime	PRIMOS
Ultimate	Ultimate
IN2	IN-Pick

CONVERT.VOC first converts Pick file definition items (with D/CODE = D) to UniVerse file definition entries (with F1 = F). Q-pointers are implemented as they are in Pick. Proc entries are copied without conversion. If they contain any non-UniVerse verbs or keywords, you must remove them or replace them with UniVerse equivalents.

Next, CONVERT.VOC passes all entries to the DC (dictionary conversion) utility for conversion, then writes them to the VOC file. CONVERT.VOC does not convert entries that do not match the UniVerse template for the particular Pick system from which the Master Dictionary came. Such entries are listed in an error report.

CONVERT.VOC does not overwrite any existing records in the VOC file. Nor does it change or delete the original Master Dictionary or VOC file.

For more information about converting a Pick Master Dictionary, see *UniVerse Guide for Pick Users*.

Use COPY to copy records to a file, a printer, or the terminal screen. COPY copies records to other records in the same file and to records in other files. You can also use COPY to rename records.

Syntax

COPY FROM [**DICT**] *source.file* [**TO** [**DICT**] *target.file*]
[*rec1* [**,** *new.rec1*] [*rec2* [**,** *new.rec2*] ...] | **ALL**] [*options*]

Qualifiers

DICT	Copies records to or from the file dictionary.
source.file	The name of the file containing the records to copy. If you do not specify DICT, records are copied from the data file.
target.file	The name of the file to which the records are copied. If you do not specify DICT, records are copied to the data file.
rec	The record ID of the record to be copied. Separate multiple record IDs with spaces.
new.rec	The record ID of the new copy of the record. If you do not specify *new.rec*, the new record has the same record ID as the old record. If you copy a record to another record in the same file, you must specify *new.rec*.
ALL	Copies all records in the source file to the target file. The ALL keyword overrides an active select list.

options can be any of the following:

CRT	Copies records to the screen.
DELETING	Removes the records from the source file. If a record cannot be copied to the target file, the source file record is not deleted.
FIRST *n*	Copies the first *n* records in *source.file*. COPY creates select list 0 (unless a select list is active) and copies the records specified by the first *n* record IDs in the select list.
HEX	Lists records in hexadecimal format. Use this option when you copy records to the printer or the terminal.

ID.SUP	Suppresses list of record IDs on the printer or at the terminal.
LPTR [*n*]	Sends output to a printer via logical print channel *n*. If you do not specify *n*, logical print channel 0 is used. If you specify LPTR and CRT, COPY ignores CRT and sends output to the printer.
NEW.PAGE	Lists each record on a separate page. Use this option when you copy records to the printer or the terminal.
NO.PAGE	Suppresses automatic paging. Use this option when you copy records to the printer or the terminal.
NUM.SUP	Suppresses line numbers. Use this option when you copy records to the printer or the terminal.
OVERWRITING	Overwrites records in the target file that have the same record ID as records being copied from the source file. If you do not specify OVERWRITING, the records in the source file that have the same record ID as records in the target file are not copied.
REPORTING	Lists the status of the OVERWRITE, UPDATING, and DELETING options, and the record IDs of records being copied and the new record IDs.
SQUAWK	Same as REPORTING.
UPDATING	Copies a record only if a record with the same record ID exists in *target.file*. The new record overwrites the old.

Description

You can copy records individually, in groups, or all at once. You can also copy records within the source file by using different target record IDs.

To copy records from one file to another, either in groups or individually, list the record IDs on the command line like this:

rec1 rec2 rec3 ...

To copy records from one file to another, changing the record IDs, separate the original record ID from the new record ID with a comma, like this:

rec1,*new.rec1 rec2*,*new.rec2 rec3*,*new.rec3 ...*

You can also copy several records and rename only some of them, like this:

rec1 rec2,*new.rec2 rec3 rec4*,*new.rec4 ...*

After you copy compiled I-descriptors from a dictionary, use the COMPILE.DICT command. This avoids any problems that may occur because of changed dependencies or relationships.

COPY can use an active select list 0 if you do not specify record IDs. You cannot use a select list when copying records to the same file, because you cannot change a record's ID using a select list.

Examples

This example copies the records BOLTS and NUTS from the STOCK.HISTORY file to the STOCK.BACKUP file and displays verbose system messages explaining what it is doing:

```
>COPY FROM STOCK.HISTORY TO STOCK.BACKUP BOLTS NUTS REPORTING
Source file name       = STOCK.HISTORY.
Destination file name  = STOCK.BACKUP.
OVERWRITING option     = FALSE.
UPDATING option        = FALSE.
DELETING option        = FALSE.

"BOLTS" copied to "BOLTS".
"NUTS" copied to "NUTS".

2 records copied.
>
```

The next example copies all dictionary entries from the PAYABLES file dictionary to the dictionary of the OLD.VENDORS file:

```
>COPY FROM DICT PAYABLES TO DICT OLD.VENDORS ALL

25 records copied.
>
```

The next example selects orders dated September 1992 from the ORDERS file, then copies them from the ORDERS file to the ORDERS.SEPT file:

```
>SELECT ORDERS WITH DATE GE "1 SEPT 92" AND LT "1 OCT 92"

95 record(s) selected to SELECT list #0.
>>COPY FROM ORDERS TO ORDERS.SEPT
You have an active SELECT list.
Do you wish to copy the records previously SELECTed?
The first record ID = "8864".
```

```
Enter Y or N: Y

95 records copied.
>
```

The next example copies the record DAT from the STOCK.ARCH file to the record DAT_H in the STOCK.H file and deletes the original record from the STOCK.ARCH file:

```
>COPY FROM STOCK.ARCH TO STOCK.H DAT,DAT_H DELETING REPORTING
Source file name       = STOCK.ARCH.
Destination file name  = STOCK.H.
OVERWRITING option     = FALSE.
UPDATING option        = FALSE.
DELETING option        = TRUE.

"DAT" deleted from "STOCK.ARCH".
"DAT" copied to "DAT_H".

1 record copied.
>
```

The next example creates a select list of record IDs that meet a specified criterion, in this case, the value BLUE in the COLOR field. You are asked if you want to copy the selected records. When you answer **Y**, the records are copied.

```
>SELECT CARS WITH COLOR = "BLUE"

3 record(s) selected to SELECT list #0.
>>COPY FROM CARS TO CARS.BLUE REPORTING
Source file name       = CARS.
Destination file name  = CARS.BLUE.
OVERWRITING option     = FALSE.
UPDATING option        = FALSE.
DELETING option        = FALSE.

You have an active SELECT list.
Do you wish to copy the records previously SELECTed?
The first record ID = "HATCHBACK".
Enter Y or N: Y
"HATCHBACK" copied to "HATCHBACK".
"COUPE" copied to "COUPE".
"GT" copied to "GT".

3 records copied.
>
```

Use COPY.LIST to copy a saved list from the &SAVEDLISTS& file to another file.

Syntax

COPY.LIST [*filename*] [*listname*]

Qualifiers

filename The name of the file where the list will be copied. If you do not specify *filename*, COPY.LIST prompts you to enter one.

listname The name of a saved list, which is a record in the &SAVEDLISTS& file. If you do not specify *listname*, COPY.LIST prompts you to enter one.

Description

COPY.LIST is a proc that invokes the COPY processor.

For more information about the &SAVEDLISTS& file, see Chapter 4.

Example

This example creates a select list of records from the file SUN.MEMBER, saves the list as the record 1990 in the &SAVEDLISTS& file, then copies the saved list to the VOC file. The record ID of the copied saved list in the VOC file is also 1990.

```
>SELECT SUN.MEMBER WITH YR.JOIN EQ "1990"

2 record(s) selected to SELECT list #0.
>>SAVE.LIST 1990

2 record(s) SAVEd to SELECT list "1990".
>COPY.LIST
ENTER DESTINATION FILE=VOC
ENTER LIST ID=1990

1 record copied.
>
```

CORE

Use CORE to display statistics about your current memory usage. The statistics include the number of blocks, number of bytes, and average block size for free, used, and total memory.

This command is not supported on Windows NT systems.

Syntax

CORE

Example

```
>CORE
Current Memory usage: 46880 bytes (45K)

Free :   7 blocks ( 6%),   5856 bytes (12%), 836.57 average block
Used :  06 blocks (93%),  41024 bytes (87%), 387.01 average block

Total: 113 blocks         46880 bytes        414.86 average block
```

Use COUNT to count the number of records in a file.

Syntax

COUNT [**DICT** | **USING** [**DICT**] *dictname*] *filename* [**FROM** *n*] [*selection*]

Qualifiers

DICT
: Counts records in the file dictionary of *filename*. If you do not specify DICT, records in the data file are counted.

USING [DICT] *dictname*
: If DICT is not specified, uses *dictname* as the dictionary of *filename*. If DICT is specified, the dictionary of *dictname* is used as the dictionary of *filename*.

filename
: Specifies the file containing the records you want counted. You can put *filename* anywhere in the sentence. COUNT uses the first word in the sentence that has a file descriptor in the VOC file as the filename.

FROM *n*
: Specifies that select list *n* is to be used.

selection
: A selection expression specifying the conditions that data in a record must meet for the record to be counted. A selection expression begins with the keyword WITH. For syntax details, see the WITH keyword in Chapter 2.

Description

If you enter COUNT with no options, it counts and reports the total number of records in the file.

Example

This example counts all records in the file SUN.MEMBER with LNAME equal to BROWN:

```
>COUNT SUN.MEMBER WITH LNAME EQ BROWN

1 records counted.
```

CP

Use CP to print records on the system printer. CP prints only to printer channel 0.

Syntax

CP [**DICT**] *filename* [*records* | *] [*options*]

Qualifiers

DICT	Specifies the file dictionary.
filename	The file containing the record you want to print.
records	The record IDs of records you want to print.
*	Specifies all records in *filename*.

options can be any of the following:

–FORM.FEED	Lists each record on a separate page.
–HEX	Copies data in hexadecimal format.
–NO.PAGE	Suppresses automatic paging.

Example

The following example prints the record LIST in the VOC file:

```
>CP VOC LIST
```

Use CREATE.FILE to create a UniVerse file. CREATE.FILE creates the data file, the file dictionary, and the file definition record in the VOC file.

Syntax

CREATE.FILE [**DICT** | **DATA**] [*filename* [**,***datafile*]] [*type*] [*modulo*] [*separation*] [*parameter* [*value*] ...] [*description*]

Qualifiers

DICT — Specifies only the file dictionary. If you do not supply file specifications on the command line, the following default specifications are used for a file dictionary:

type	3
modulo	1
separation	2

DATA — Specifies only the data file.

filename — The UniVerse filename. CREATE.FILE creates the data file with the name *filename* and the file dictionary with the name D_*filename*. If you do not specify *filename*, CREATE.FILE prompts for it. *filename* must follow the UniVerse naming conventions. For more information, see "File Naming Conventions."

datafile — The name of a data file, used when creating dictionaries of files with multiple data files. Use a comma (no spaces allowed) to separate the data file name from the filename of the UniVerse file.

type — The Universe file type for the file you want to create. Type 1 or type 19 files are not hashed and are usually used to store text files such as BASIC programs. Types 2 through 18 are hashed files. Type 25 is a balanced tree file. Type 30 is a dynamic file. You can also specify the keyword DYNAMIC for a type 30 file. If you do not specify *type*, CREATE.FILE prompts for it.

modulo — An integer from 1 through 8,388,608 defining the number of groups in the file. If you do not specify *modulo*, CREATE.FILE prompts for *modulo* and *separation*. *modulo* is ignored for nonhashed and dynamic files.

separation An integer from 1 through 8,388,608 specifying the group buffer size in 512-byte blocks. If you do not specify *separation* and one is needed, the file is created with a separation of 4, unless you are in prompting mode. If you press **Return** in response to the *separation* prompt, the file is not created. *separation* is ignored for nonhashed and dynamic files.

description Additional information about the file. This description is put in field 1 of the VOC file entry starting in the third character position. A file is a file descriptor type F. You can display the description as a help message for *filename* by entering ***?filename***. You must specify *description* in quotation marks when you create dynamic files.

parameter specifies a dynamic file parameter. *parameter* can be any of the following:

GENERAL Specifies that the general hashing algorithm should be used for the dynamic file. GENERAL is the default.

SEQ.NUM Specifies that a hashing algorithm suitable for sequential numbers should be used for the dynamic file. You should use this hashing algorithm only for records with IDs that are mainly numeric, sequential, and consecutive.

GROUP.SIZE {1|2} Specifies the size of each group in the file. The argument 1 specifies a group size of 2048 bytes, which is equivalent to a separation of 4. The argument 2 specifies a group size of 4096 bytes, which is equivalent to a separation of 8. A group size of 1 is the default.

MINIMUM.MODULUS *n*
Specifies the minimum modulo of the file. This keyword takes an integer argument greater than 1. This value is also the initial value of the modulo of the dynamic file. A minimum modulo of 1 is the default.

SPLIT.LOAD *n*	Specifies the level at which the file's modulo is increased by 1. SPLIT.LOAD takes a numeric argument indicating a percentage of the space allocated for the file. When the data in the file exceeds the space allocated for the file, the data in one of the groups divides equally between itself and a new group, to increase the modulo by 1. The default SPLIT.LOAD is 80%.
MERGE.LOAD *n*	Specifies the level at which the file's modulo is decreased by 1. MERGE.LOAD takes a numeric argument indicating a percentage of the space allocated for the file. When the data in the file uses less than the space allocated for the file, the data in the last group of the file merges with another group, to decrease the modulo by 1. The default MERGE.LOAD is 50%.
LARGE.RECORD *n*	Specifies the size of a record to be considered too large to be included in the primary group buffer. This keyword takes an argument that can be specified as an integer or a percentage. Specified as an integer, the argument is the number of bytes a record must contain to be considered a large record. Specified as a percentage, the argument is a percentage of the group size. When the size of a record exceeds the value specified, the data for the record is placed in an overflow buffer, but the record ID is place in the primary buffer. This method of large record storage increases access speed. The default LARGE.RECORD size is 80%.
RECORD.SIZE *n*	Causes the values for group size, and large record size to be calculated based on the value of the estimated average record size specified. RECORD.SIZE takes an argument of your estimate of the average record size for the dynamic file, specified in bytes. RECORD.SIZE does not limit the size of records. If you specify a value for group size, or large record size, the value you specify overrides the value calculated by RECORD.SIZE.

MINIMIZE.SPACE Calculates the values for the split load, merge load, and the large record size to optimize the amount of space required by the file at the expense of access time. If you specify a value for split load, merge load, or large record size, the value you specify overrides the value that is calculated by MINIMIZE.SPACE. If MINIMIZE.SPACE and RECORD.SIZE are specified, the value for large record size calculated by MINIMIZE.SPACE overrides the value calculated by RECORD.SIZE.

Description

CREATE.FILE creates or modifies the file definition in the VOC file. In addition, CREATE.FILE allocates space for the data file and the file dictionary and creates a default field definition in the dictionary for record IDs.

Any existing UniVerse file can be converted into a file made up of multiple data files by issuing the following command:

CREATE.FILE DATA *filename,datafile type modulo separation*

If a file already comprises multiple data files, the following command expands *filename* to *filename,filename*:

CREATE.FILE DATA *filename*

Dynamic files exist to make file management easier for users. The default parameters are set so most dynamic files work correctly. For some files, you can increase efficiency by changing the default file parameters using CONFIGURE.FILE. You should verify that your changes to the default parameters actually increase the efficiency of the file using the ANALYZE.FILE command.

File Naming Conventions

UniVerse filenames can be up to 255 characters long, but it makes sense to keep them as short as you can. If your operating system has a 14-character limit on filenames, UniVerse truncates the filename to 9 characters and adds a 3-digit sequencer. On these operating systems it is important to keep the first 9 characters of each filename unique.

Note: On Windows NT, UniVerse is designed to run in the NT file system (NTFS). But Windows NT also supports the MS-DOS FAT file system which limits

filenames to 8 characters with a 3-character extension, and has a further set of characters that are not permitted in filenames. UniVerse makes no special provision for these filenames or special characters. If you want to store UniVerse files in an MS-DOS FAT file system, you must follow the MS-DOS conventions when you name UniVerse files.

Filenames in UniVerse can contain any character except CHAR(0). If you use spaces and control characters in your filenames, you must enclose the entire filename in quotation marks whenever you use it in a UniVerse command, including the CREATE.FILE command.

Operating systems limit the characters that can be used in a filename. You can still specify these characters in UniVerse filenames, but UniVerse maps the problem characters at the operating system level. This means that some UniVerse filenames may look different when viewed from the operating system. This does not affect the filename you use on the command line. The mapping UniVerse uses depends on the operating system.

UNIX:

This character…	Maps to…
/	?\
?	??
empty filename	?0
. (leading period)	?.

Windows NT:

This character…	Maps to…
‘ /	%S
?	%Q
empty filename	%
"	%D
%	%%
*	%A
:	%C

This character…	Maps to…
<	%L
| (vertical bar)	%V
>	%G
\	%B
↑ (up-arrow)	↑↑ (up-arrow)
ASCII 1 through ASCII 26	↑A through ↑Z
ASCII 27 through ASCII 31	↑1 through ↑5

Example

This example creates the data file and the dictionary of a UniVerse file called OVERDUE. The data file is a type 2 file with modulo and separation of 1. Field 1 of the file descriptor contains the description “Overdue accounts receivable.” The dictionary uses the default file parameters: file type 3, modulo 1, and separation 2.

```
>CREATE.FILE OVERDUE 2 1 1 Overdue accounts receivable
Creating file "OVERDUE" as Type 2, Modulo 1, Separation 1.
Creating file "D_OVERDUE" as Type 3, Modulo 1, Separation 2.
Added "@ID", the default record for RetrieVe, to "D_OVERDUE".
```

The next example creates a file dictionary for the file LONG.OVERDUE. The file type is 4, the modulo is 3, and the separation is 2.

```
>CREATE.FILE DICT LONG.OVERDUE 4 3 2
Creating file "D_LONG.OVERDUE" as Type 4, Modulo 3, Separation 2.
Added "@ID", the default record for RetrieVe, to "D_LONG.OVERDUE".
```

The next example creates a new data file for the UniVerse file LONG.OVERDUE. The new data file is called MONTH. It is a type 2 file with a modulo of 3 and a separation of 2.

```
>CREATE.FILE DATA LONG.OVERDUE,MONTH 2 3 2
Creating a multilevel data file.
Creating file "LONG.OVERDUE/MONTH" as Type 2, Modulo 3, Separation 2
```

The following table shows the VOC entries for the files created by the previous examples:

Command	VOC Entry

`CREATE.FILE OVERDUE 2 1 1`	`    OVERDUE`
	`001 F`
	`002 OVERDUE`
	`003 D_OVERDUE`

`CREATE.FILE DICT LONG.OVERDUE 4 3 2`	`    LONG.OVERDUE`
	`001 F`
	`002`
	`003 D_LONG.OVERDUE`

`CREATE.FILE DATA LONG.OVERDUE,MONTH 2 3 2`	`    LONG.OVERDUE`
	`001 F`
	`002 LONG.OVERDUE`
	`003 D_LONG.OVERDUE`
	`004 M`
	`005`
	`006`
	`007 MONTH`
	`008 MONTH`

CREATE.INDEX

Use CREATE.INDEX to create a secondary index for a file.

Syntax

CREATE.INDEX [**DICT** | [**USING** [**DICT**] *dictname*]] [*filename*]
[**AT** *account*] [*fields*] [**NO.NULLS**]

Qualifiers

DICT
Specifies a file dictionary.

USING [DICT] *dictname*
If DICT is not specified, uses *dictname* as the dictionary of *filename*. If DICT is specified, the dictionary of *dictname* is used as the dictionary of *filename*.

filename
The name of the file containing fields you want to index. If you do not specify *filename*, CREATE.INDEX prompts you for it.

AT
Specifies the UniVerse account where you want to store the indices you create. *account* must be defined in the UV.ACCOUNT file. If *filename* already has indices, you cannot use the AT clause because all indices are stored as files in one account directory.

fields
A list of fields separated by spaces to use as secondary access keys. If *fields* is not specified, CREATE.INDEX prompts you to enter a single field.

NO.NULLS
Specifies not to index empty secondary key values in the newly created indices. You can save disk space and processing time using this facility, but reports generated from empty-string-suppressed secondary keys do not contain values for the empty keys.

Description

Setting up a secondary index is a two-step process. First you create the index with CREATE.INDEX. Then you build the index with BUILD.INDEX. You must use the BUILD.INDEX command to build the initial index, even if the file you want to index contains no records. If the indexed file contains records when you create the index, a warning reminds you to build the index.

The file is not locked for use by other users while the index is created.

If CREATE.INDEX cannot find a field definition in the file dictionary, it looks for it in the VOC file.

After an index is created for a field, UniVerse no longer consults the file dictionary for information about the field. The index stores information such as a field number or I-descriptor expression. This ensures the accuracy of the index even if the dictionary changes.

For a field to be indexed as a multivalued field, it must be defined as a multivalued field in the file dictionary. Single-valued fields are indexed as single keys without regard to value marks.

I-descriptor expressions that change based on data external to the environment, such as the date or the user ID, are not suitable for use as secondary keys.

If you change an I-descriptor expression in the file dictionary, you must also change the index. To change the index, use DELETE.INDEX to delete the old index, create a new index with CREATE.INDEX, and build the new index with BUILD.INDEX.

Note: When you create indices, be careful when using the TRANS or XLATE functions, or the T*file* conversion code to translate back to the main data file. While indices are updated, the main data file retains a write lock that blocks read access to the group containing the written record. When the translate key is @ID, TRANS, XLATE, and T*file* are optimized to read the written record from memory to bypass the write lock. Any other attempt to translate to a record in the locked group results in a deadlock. Also note that an I-type subroutine containing an OPEN and READ statement that tries to reread the record from the main data file results in a deadlock.

Examples

This example creates an index for the MONTHLY.STATEMENT.FLAG field of the CREDITORS file. Empty strings are not included in the index.

```
>CREATE.INDEX CREDITORS MONTHLY.STATEMENT.FLAG NO.NULLS
>
```

The next example creates two indexes, one on the BALANCE field and one on the CREDIT.RATING field of the DEBTORS file:

```
>CREATE.INDEX DEBTORS BALANCE CREDIT.RATING
>
```

The next example creates an index on the BALANCE field of the DEBTORS file. The field definitions for this file are stored in the dictionary of the CUSTOMERS file, and the index is stored in the INDICES file.

```
>CREATE.INDEX DEBTORS BALANCE USING DICT CUSTOMERS AT INDICES
>
```

Use CREATE.LDIR to create the log directory for the transaction logging system. You must be a UniVerse Administrator logged in to the UV account to use CREATE.LDIR, and transaction logging must be disabled or inactive.

Syntax

CREATE.LDIR *pathname*

Qualifier

pathname The absolute pathname of the log directory.

Description

The log directory contains the log files where warmstart and data transactions are logged. Before you can use transaction logging, you must create a log directory and a set of log files to store logged updates to recoverable files. If the log files in the log directory fill up and you need more space, you can create another log directory for them on another partition.

For best performance and data protection, put the log directory on a different disk drive from the one holding your UniVerse files. This minimizes the effect of media failure: damage to one disk drive may result in the loss of your UniVerse files or your log files, but not both.

The pathname of the log file is stored in the LOGS.DIR record in the dictionary of the UV_LOGS file.

If transaction logging is currently enabled, use SHUTDOWN.RECOVERY to disable it before using CREATE.LDIR.

Example

This example creates the log directory on the */u2* partition:

```
>CREATE.LDIR /u2/translog
```

CREATE.LFILE

Use CREATE.LFILE to create log files in the transaction logging system log directory. You must be a UniVerse Administrator logged in to the UV account to use CREATE.LFILE.

Syntax

CREATE.LFILE *size files*

Qualifiers

size The size of the log files, in bytes.

files The number of log files you want to create.

Description

CREATE.LFILE creates log files with names in the following format:

lg*nnn*

Log files are numbered in sequence, starting with the number stored in the LOG.NEXT record in the dictionary of the UV_LOGS file.

For each log file, a corresponding record is created in the UV_LOGS file.

The size of the log files you create depends on the volume of updates you expect. The block size of log files is 512.

Example

This example creates nine log files in the log directory. The size of each file is 500K.

```
>CREATE.LFILE 512000 9

Creating lg348 (Each '*' = 1024 bytes.)
***************************************************************************
***************************************************************************
***************************************************************************
***************************************************************************
***************************************************************************
***************************************************************************
*******************lg348 Created.
```

```
Creating lg349 (Each '*' = 1024 bytes.)
****************************************************************************
****************************************************************************
****************************************************************************
****************************************************************************
****************************************************************************
****************************************************************************
*******************lg349 Created.
    .
    .
    .
```

CS

Use CS to clear the screen and return the cursor to the home position. CS is a synonym for the CLR command.

Syntax

CS

Use CSH to invoke a UNIX C shell (*csh*) from within UniVerse.

This command is not supported on Windows NT systems.

Syntax

CSH [**–c** "*command*" | *script*]

Qualifiers

command The command text. It must be preceded by the flag *–c*. To avoid confusion, enclose *command* in quotation marks.

script The pathname of a UNIX shell script to be executed. The shell script file does not need execute privileges.

Description

Once you invoke a C shell, you can execute any UNIX command. You can also give CSH an argument to execute a single command or a shell script without exiting UniVerse. To return to the UniVerse prompt, enter **`exit`** or press **Ctrl-D**.

Availability of the C shell is system-dependent. See your UNIX documentation for a discussion of C shell features.

Use the SH command to execute UNIX Bourne shell (*sh*) commands.

Example

This example invokes the C shell and runs the UNIX command *ls* to list the contents of the current directory:

```
>CSH -c"ls -lt"
total 707
drwxrwxrwx   2 susan   acctg          512 Jul 06 11:43 I_CREDITORS
-rw-rw-r--   1 susan   acctg         1536 Jul 06 11:43 CREDITORS
-rw-rw-r--   1 susan   acctg         2048 Jul 06 11:42 D_CREDITORS
-rw-r--r--   1 susan   acctg        49152 Jul 06 11:41 VOC
drwxrwxrwx   2 susan   acctg          512 Jul 02 16:55 I_ORDERS
-rw-r--r--   1 susan   acctg         3072 Jul 02 16:55 D_ORDERS
drwxrwxr-x   2 susan   acctg          512 Jul 02 16:43 LONG.OVERDUE
-rw-rw-r--   1 susan   acctg         4096 Jul 02 16:41 D_LONG.OVERDUE
-rw-rw-r--   1 susan   acctg         2048 Jul 02 16:40 D_OVERDUE
-rw-rw-r--   1 susan   acctg         1536 Jul 02 16:40 OVERDUE
drwxrwxrwx   2 susan   acctg          512 Jul 02 16:07 CUSTOMERS
-rw-r--r--   1 susan   acctg         3072 Jul 02 16:06 D_CUSTOMERS
drwxr-sr-x   2 susan   acctg          512 Jul 02 14:22 &COMO&
```

CT

Use CT to display records on the terminal.

Syntax

CT [**DICT**] *filename* [*records* | *] [*options*]

Qualifiers

DICT	Specifies the file dictionary.
filename	The file containing the record you want to display.
records	The record IDs of records you want to display.
*	Specifies all records in the file.

options can be any of the following:

–FORM.FEED	Lists each record on a separate page.
–HEX	Copies data in hexadecimal format.
–NO.PAGE	Suppresses automatic paging.

Example

This example displays the record LIST in the VOC file:

```
>CT VOC LIST

     LIST
0001 V
0002 LIST
0003 Q
0004 S
```

Use DATA in a paragraph to specify a response to an input request. To use the DATA statement, enter the program name or verb name on one line, then enter the DATA statement on the next lines.

Syntax

DATA *data*

Qualifier

data The response to the input request from a UniVerse BASIC program or statement, or to a verb called by a paragraph.

Description

When a BASIC program, sentence, paragraph, or command executed in the paragraph requires input, it uses the data from the first DATA statement instead of prompting for input from the terminal. The second time input is required, the data from the second DATA statement is used, and so on. When the data from all previously executed DATA statements has been used, a program, sentence, paragraph, or command that requires input prompts for a response from the terminal.

You can use in-line prompting with a DATA statement.

You can use DATA statements only in a paragraph. They have no function on the command line.

Example

This example represents a paragraph as it appears in a VOC file:

```
001 PA
002 RUN BP DUE.LIST
003 DATA <<ENTER DATE>>
004 DATA YES
005 RUN BP VENDORS
006 DATA <<ENTER MONTH>>
```

DATE

Use DATE to display the current day, date, and time on your terminal.

Syntax

DATE

Description

The time is displayed using a 12-hour clock.

You can change the format of the date from the standard United States format (month, day, year) to the international format (day, month, year) using the DATE.FORMAT command.

Example

```
>DATE
Thursday, July 06, 1995  11:57am
>
```

Use DATE.FORMAT to set or change the default date format.

Syntax

DATE.FORMAT [**ON** | **OFF** | *conversion* | **INFORM**]

Qualifiers

ON	Specifies international date format. This is the default format if you specify DATE.FORMAT without options.
OFF	Specifies United States date format.
conversion	Any valid date conversion code.
INFORM	Sets the system variable @SYSTEM.RETURN.CODE to the value of the DATE.FORMAT flag (0 = US, 1 = European).

Description

In international format, the day of the month appears first. In United States format, the month appears first.

If you specify a date conversion, the conversion format becomes the default date format. Date conversions specified in file dictionaries or in ICONV or OCONV functions use the default date format except where they specifically override it.

If, after you specify a date conversion, you want to reset the date format to the system default, use the following command:

```
>DATE.FORMAT D
```

DATE.FORMAT changes only the format. It does not change the internal representation of dates as returned by the DATE function or the @DATE system variable.

DATE.FORMAT does not display the date. Use the DATE command to display the date.

The date format you specify remains in effect until you log out. See Technical Bulletin *UniVerse Internationalization Support, Updated for Release 7.3.2* (74-0065).

Examples

```
>DATE.FORMAT ON
>DATE
Wednesday, 10 May 1995  09:35am
>DATE.FORMAT OFF
>DATE
Wednesday, May 10, 1995  09:35am
```

This example shows how you can use a date conversion to change the default date format. The dictionary entry defining the DATE field in the ORDERS file specifies a date conversion of D2:

```
     DATE
0001 D
0002 1
0003 D2
0004 Order Date
0005 9R
0006 S
```

The date conversion in the following example specifies the order *year-month-day*. The format modifier in brackets specifies that two characters be used to display the month, without suppressing leading zeros. The second DATE.FORMAT command resets the date format to the system default.

```
>DATE.FORMAT D2-YMD[,2]
>LIST ORDERS DATE

LIST ORDERS DATE 03:10:57pm  95-09-14  PAGE    1
@ID..    Order Date

10004      92-08-22
10006      92-04-22
10002      92-07-14
10005      92-11-25
10003      92-03-07
10001      92-02-11
10007      92-07-06

>
```

```
>DATE.FORMAT D
>LIST ORDERS DATE

LIST ORDERS DATE 03:13:25pm  14 Sep 1995  PAGE    1
@ID..    Order Date

10004     22 AUG 92
10006     22 APR 92
10002     14 JUL 92
10005     25 NOV 92
10003     07 MAR 92
10001     11 FEB 92
10007     06 JUL 92

7 records listed.
>
```

DEACTLIST

Use DEACTLIST to deactivate files for transaction logging. You must be a UniVerse Administrator logged in to the UV account to use DEACTLIST.

Syntax

DEACTLIST *listname*

Qualifier

listname The record ID of a select list created and saved in the &SAVEDLISTS& file by the MKFILELIST command.

Description

Use the MKFILELIST command to create a list of files that you want to activate and deactivate for transaction logging. Use the ACTLIST command to activate the files in the list.

For information about transaction logging, see UniVerse Transaction Logging and Recovery.

Example

This example deactivates all files listed in the saved list INV.FILE.LIST:

```
>DEACTLIST INV.FILE.LIST
```

Use DECATALOG to delete a locally cataloged program from your VOC file and to delete the object code for that program. DECATALOG does not delete the source code of the program. (Use DELETE to do this.)

Syntax

DECATALOG [*filename* [*program*]]

Qualifiers

filename The name of the program file. If you do not specify *filename*, you are prompted for it.

program The name of the program to be decataloged. If you do not specify *program*, DECATALOG prompts for it. If there is an active select list, it is used for *program*.

Example

This example deletes the verb entry TEST from the VOC file and deletes the object code record TEST from the file BP.O:

```
>DECATALOG BP TEST
TEST removed from VOC.  Object DELETEd from BP.O.
```

DEFINE.DF

Use DEFINE.DF to create or modify a UniVerse distributed file. You can use distributed files when you want to organize data files logically, by functional groups. You can also use a distributed file when you want to store records in the same file but on different disk partitions, or when a file exceeds the size limit for files on your system.

Syntax

DEFINE.DF [**DATA**] *dist.filename* [**ADDING**] *part.name* [*part#*]
[*part.name* [*part#*] ...] [*algorithm*] [**FORCE**]

DEFINE.DF [**DATA**] *dist.filename* **REMOVING** *part.name* [*part.name* ...]
[**RETAIN**] [**FORCE**]

DEFINE.DF [**DATA**] *dist.filename part.name part#* [*part.name part#* ...]
[**FORCE**]

DEFINE.DF [**DATA**] *dist.filename algorithm* [**FORCE**]

DEFINE.DF *part.name* **CANCEL**

Use the first syntax to create a new distributed file or add new part files to an existing distributed file.

Use the second syntax to remove part files from a distributed file.

Use the third syntax to change the part number of a part file.

Use the fourth syntax to change the partitioning algorithm of a distributed file.

Use the fifth syntax to cancel the part number and partitioning algorithm of a part file.

Qualifiers

DATA	Specifies that only the data file is to be created or modified.
dist.filename	The name of the distributed file you are creating or modifying.
ADDING	Adds a new part file to an existing distributed file. If you are creating a new distributed file, the ADDING keyword is optional. If you are adding a new part file to an existing distributed file, you must use the ADDING keyword.

part.name	The name of a UniVerse file you are adding to or removing from a distributed file, or whose part number you are changing. The VOC file and nonhashed files cannot be part files.
part#	A unique part number to be associated with the specified part file. If you are creating a new distributed file or adding a new part file to an existing distributed file, you must specify the part number. If the part file is already part of another distributed file, you need not specify *part#*.
algorithm	An expression that defines the partitioning algorithm for the distributed file. If you are creating a new distributed file or adding a new part file to an existing distributed file, you must specify a partitioning algorithm. See "Specifying the Partitioning Algorithm" for more information.
FORCE	Forces the part number or the algorithm to be changed even if the part file belongs to more than one distributed file.
REMOVING	Removes the specified part file from the distributed file. REMOVING also removes the part number and partitioning algorithm from the part file, unless you specify the RETAIN option.
RETAIN	Used only with the REMOVING clause, RETAIN retains the part number and algorithm in the part file after it is removed from the distributed file.
CANCEL	Cancels the part number and partitioning algorithm of a part file.

Description

A distributed file is made up of one or more part files. Part files are standard UniVerse hashed files (including dynamic files). Type 1 and type 19 files cannot be part files.

Each part file has a unique part number associated with it. A distributed file uses a partitioning algorithm to distribute records among part files. The algorithm can be user-defined or system-defined. The part number and the partitioning algorithm, or a reference to it, are stored with the part file.

When you create a new distributed file, DEFINE.DF creates a VOC entry that defines the file. DEFINE.DF also creates, in the &PARTFILES& file, one record for each part file. The &PARTFILES& file is in the UV account. For more information, see &PARTFILES&.

If a part file belongs to more than one distributed file, the part number of the file must be the same in all distributed files, and all distributed files to which a part file belongs must use the same algorithm.

Specifying the Partitioning Algorithm. You must specify the partitioning algorithm when you create a distributed file. UniVerse uses the partitioning algorithm to determine in which part file a record belongs.

The partitioning algorithm can be an I-descriptor expression or an external routine, or it can be system-defined. Use the INTERNAL keyword to specify an I-type expression, use the EXTERNAL keyword to specify an external routine, and use the SYSTEM keyword to specify the default partitioning algorithm.

The partitioning algorithm must return a part number. The part number must be a nonzero integer. An I-type expression should use values stored in the @ID system variable to return a part number. The expression cannot access any other data in the record.

Use the following syntax to specify the partitioning algorithm:

INTERNAL Specifies an I-descriptor expression as the partitioning algorithm.

The INTERNAL clause has the following syntax:

INTERNAL { [[**DATA**] *filename*] *record.ID* | *expression* }

DATA Specifies that the algorithm expression is stored in the data file of *filename*. If you do not use the DATA keyword, the expression is stored in the dictionary of *filename*.

filename The name of the file containing the algorithm expression.

record.ID The ID of the record containing the algorithm expression. If you do not specify *filename*, the record is assumed to be an entry in the VOC file.

expression The I-descriptor expression used as the partitioning algorithm. Enclose *expression* in quotation marks if it contains spaces or if it is the same as the record ID of an entry in the VOC file.

Fields referred to by the I-descriptor expression must be in the same file as the record containing the I-descriptor. If you enter *expression* on the command line, referenced fields must be in the VOC file. Use the system variable, @ID, to reference record IDs in the distributed file you are defining.

EXTERNAL Specifies a routine as the partitioning algorithm that is external to UniVerse. The EXTERNAL clause has the following syntax:

EXTERNAL *routine.name*

routine.name is the external routine used as the partitioning algorithm.

SYSTEM [*s*] Specifies the default partitioning algorithm. *s* is the character used as a separator in record IDs. If you do not specify *s*, a hyphen (–) separator is the default.

Examples

This example defines a distributed file called ORDERS. The ORDERS file comprises two UniVerse files, ORD.USA and ORD.CANADA. The file uses the default partitioning algorithm.

```
>DEFINE.DF ORDERS ORD.USA 1 ORD.CANADA 2 SYSTEM
Creating file "D_ORDERS" as Type 30.
Added "@ID", the default record for RetrieVe, to "ORDERS".
Loading default SYSTEM algorithm into DICT ORDERS
Compiling "@PART.ALGORITHM".
FIELD ( @ID , - , 1 )
Part file "ORD.USA", Path "/u2/accts/ORD.USA", Part number 1 Added.
Part file "ORD.CANADA", Path "/u2/accts/ORD.CANADA", Part number 2 Added.
```

The next example adds a third UniVerse file to the ORDERS distributed file:

```
>DEFINE.DF ORDERS ADDING ORD.FRANCE 3
Part file "ORD.FRANCE", Path "/u2/accts/ORD.FRANCE", Part number 3 Added.
```

The next example removes the part file ORD.MEXICO from the ORDERS distributed file, retaining the part number and partitioning algorithm in the ORD.MEXICO file:

```
>DEFINE.DF ORDERS REMOVING ORD.MEXICO RETAIN
Part file "ORD.MEXICO", Path "/u2/accts/ORD.MEXICO", Part number 4 Removed.
```

The next example changes the partitioning algorithm of the ORDERS file. The user-defined algorithm is an I-descriptor expression stored as the record ORD.ALG in the VOCLIB file.

```
>DEFINE.DF ORDERS INTERNAL VOCLIB ORD.ALG
```

Use DEL.RFILE to delete a series of transaction logging log files that have been restored and rolled forward. Deleting log files that have been rolled forward frees up disk space so you can restore more log files. You must be a UniVerse Administrator logged in to the UV account to use DEL.RFILE.

Syntax

DEL.RFILE *first.log last.log* [*logdir.path*]

Qualifiers

first.log The number of the first log file to delete.

last.log The number of the last log file to delete.

logdir.path The absolute pathname of the log directory containing the restored and rolled-forward log files. If you do not specify a pathname, the log directory defined by the LOGS.DIR record in the dictionary of the UV_LOGS file is used.

Description

If any of the log files you specify have entries in the UV_LOGS file, DEL.RFILE can delete them only if their status is Released. If the log files do not have entries in UV_LOGS, DEL.RFILE deletes them. DEL.RFILE does not change anything in the UV_LOGS file.

Example

This example deletes four log files from */u2/logrestore*:

```
>DEL.RFILE 349 352 /u2/logrestore
Files  lg349 lg350 lg351 lg352 have been removed
>
```

DELETE

Use DELETE to remove records from a file.

Syntax

DELETE [**DICT**] *filename* [*records*]

Qualifiers

DICT	Deletes records from the file dictionary. If you do not specify DICT, records from the data file are deleted.
filename	The name of the file from which records are deleted.
records	The IDs of records to be deleted, separated by spaces. Do not specify *records* if select list 0 is active.

Description

You can use select list 0 to specify records to delete. If select list 0 is active, DELETE displays the following messages:

```
You have an active SELECT list.
Do you wish to DELETE the records previously SELECTed?
The first record ID = "10002".
Enter Y or N:
```

DELETE displays only the first record ID. Enter **Y** to delete all the records specified by the select list. Enter **N** to keep the records.

Examples

```
>DELETE PAYABLES 4108 6100

2 records DELETEd.

>SELECT PAYABLES WITH STATE EQ "MA"

2 record(s) selected to SELECT list #0.
>>DELETE PAYABLES
You have an active SELECT list.
Do you wish to DELETE the records previously SELECTed?
The first record ID = "5205".
Enter Y or N: Y

2 records DELETEd.
```

Use DELETE.CATALOG to remove globally, normally, or locally cataloged programs.

Syntax

DELETE.CATALOG *catalog.name*

Qualifier

catalog.name The name of the program to be removed from the catalog space. If the program is not in the system catalog, DELETE.CATALOG searches the VOC file for a local catalog entry. If the program is locally cataloged, only the VOC entry is deleted, not the object code.

Note: If a job is using the cataloged program when you delete it, the deletion does not affect the job unless it tries to reload the program.

Examples

This example deletes a normally cataloged program from the catalog space:

```
>DELETE.CATALOG *SALES*UPDATE
"*SALES*UPDATE" DELETEd from the system CATALOG.
>
```

The next example deletes a globally cataloged program from the catalog space:

```
>DELETE.CATALOG *UPDATE
"*UPDATE" DELETEd from the system CATALOG.
>
```

The next example deletes a locally cataloged program from the VOC file:

```
>DELETE.CATALOG TEST
"*SALES*TEST" is not in the CATALOG space.
LOCAL catalog entry "TEST" DELETEd from your VOC.
>
```

DELETE.FILE

Use DELETE.FILE to delete the VOC file entry for a UniVerse file. You can delete the data file, the file dictionary, or both.

Syntax

DELETE.FILE [**DICT** | **DATA**] [*filename*]

Qualifiers

DICT	Deletes only the file dictionary.
DATA	Deletes only the data file.
filename	The name of the file to delete. If you do not specify *filename*, DELETE.FILE uses select list 0 if it is active. The record IDs in the select list must be UniVerse filenames.

Description

If you do not specify the DATA or DICT keyword, DELETE.FILE deletes the data file and its dictionary.

If the data file pathname in the VOC file entry is the same as *filename*, or if the dictionary pathname is D_*filename*, DELETE.FILE deletes the file. If the data or dictionary pathnames are anything else, DELETE.FILE displays a warning message and asks if you really want to delete the files listed in the VOC entry.

If you specify DELETE.FILE while a select list is active, DELETE.FILE deletes all files specified in the select list.

Be careful when you delete a file that has synonyms or remote file pointers because DELETE.FILE has no effect on those synonyms or remote file pointers. Use the DELETE command to delete file synonyms and remote file pointers from the VOC file after you have deleted the file.

If *filename* is a remote file, DELETE.FILE deletes only the VOC file record that points to it. DELETE.FILE displays the pathname of the remote file.

Do not use DELETE.FILE to delete a distributed file. Instead, use the DEFINE.DF command to remove all part files. When DEFINE.DF removes the last part file, it also deletes the distributed file.

To delete a part file of a distributed file, first use DEFINE.DF to remove the part file from the distributed file, then use DELETE.FILE to delete the file. If a former part

file still retains its part number and partitioning algorithm, you must cancel them with DEFINE.DF, then use DELETE.FILE.

Note: You cannot use DELETE.FILE to delete an SQL table. Use the SQL statement DROP TABLE.

Examples

This example deletes the data file and the file dictionary of the INVENTORY.92 file:

```
>DELETE.FILE INVENTORY.92
DELETEd file "NVENTORY.92", Type 18, Modulo 23.
DELETEd file "D_INVENTORY.92", Type 3, Modulo 1.
DELETEd file definition record "INVENTORY.92" in the VOC file.
```

The next example deletes only the data file of INVENTORY.92:

```
>DELETE.FILE DATA INVENTORY.92
DELETEd file "INVENTORY.92", Type 18, Modulo 23.
Field 2 in file definition record "INVENTORY.92" has been set to nothing.
```

In the next example, INV is an F-type synonym for INVENTORY. DELETE.FILE asks if the user wants to delete the data file or the file dictionary, and the user answers **N** to both. DELETE.FILE then deletes the VOC entry for INV.

```
>DELETE.FILE INV
DATA entry "INVENTORY" does not match expected DATA "INV".
Do you wish to DELETE this DATA file (Y/N)? N
DICT entry "D_INVENTORY" does not match expected DICT "D_INV".
Do you wish to DELETE this DICT file (Y/N)? N
DELETEd file definition record "INV" in the VOC file.
```

In the next example, the file definition (F-type) for SALES.EAST defines a file in another account. DELETE.FILE does not delete the data file or the file dictionary, but it does delete the VOC entry that points to the remote files.

```
>DELETE.FILE SALES.EAST
Cannot DELETE a remote file.
Cannot DELETE a remote file.
DELETEd file definition record "SALES.EAST" in the VOC file.
```

DELETE.INDEX

Use DELETE.INDEX to delete a secondary index from a file.

Syntax

DELETE.INDEX [**DICT**] [*filename*] [*indices* | **ALL**]

Qualifiers

DICT	Specifies the file dictionary.
filename	The name of a UniVerse file from which to delete a secondary index. If you do not specify *filename*, DELETE.INDEX prompts for it.
indices	A list of index names separated by spaces. *indices* are the names of fields in *filename* used as secondary index keys.
ALL	Specifies to delete all the secondary index keys in the file.

Description

If you do not specify either *indices* or ALL, DELETE.INDEX prompts you to enter an index name.

Use DELETE.LFILE to delete empty log files from the transaction logging log directory. You must be a UniVerse Administrator logged in to the UV account to use DELETE.LFILE.

Syntax

DELETE.LFILE *files*

Qualifier

files The number of log files you want to delete from the log directory. DELETE.LFILE deletes only files whose status is Available.

Description

DELETE.LFILE verifies that each log file is empty, then deletes the log file and the corresponding record in the UV_LOGS file, and reduces the value of the LOG.NEXT record in the dictionary of UV_LOGS.

Example

This example deletes four empty log files from the log directory:

```
>DELETE.LFILE 4

Deleting lg356

Deleting lg355

Deleting lg354

Deleting lg353
>
```

DELETE.LIST

Use DELETE.LIST to remove a saved select list that was created with the SAVE.LIST command, or to remove a sentence stack that was saved by logging out.

Syntax

DELETE.LIST [*listname* | *]

Qualifiers

listname The record ID of the saved list in the &SAVEDLISTS& file. If you do not specify *listname*, DELETE.LIST deletes a list called &TEMP*port#*&. See the SAVE.LIST command for information about this listname.

* Specifies all *listnames* in the &SAVEDLISTS& file. DELETE.LIST clears the &SAVEDLISTS& file, leaving only your saved sentence stacks.

Examples

To delete the list called DECEMBER, enter the following:

```
>DELETE.LIST DECEMBER
Saved list "DECEMBER" DELETEd.
```

To delete a list saved without a name, enter the following:

```
>DELETE.LIST
Saved list "&TEMP-11057&" DELETEd.
```

Use DISABLE.INDEX to disable automatic updating of the secondary key indices of a file.

Syntax

DISABLE.INDEX [**DICT**] [*filenames*]

Qualifiers

DICT Specifies the file dictionary.

filenames The names of the UniVerse files for which to disable secondary index updating. If you do not specify *filenames*, DISABLE.INDEX prompts for them.

Description

After you build an index, automatic updating is enabled. Disabling automatic updating can increase processing speed when entering data. However, reports generated from files while automatic updating is disabled can contain incorrect information. That is, records added after updating is disabled cannot be accessed using a secondary key, deleted records can still be accessed using a secondary key, and modified records can be associated with the wrong secondary key.

Use ENABLE.INDEX to reenable automatic indexing. The ENABLE.INDEX command does not update index entries. To make the index up-to-date, issue the UPDATE.INDEX command. It is good practice to issue an UPDATE.INDEX command after you use the ENABLE.INDEX command.

Users who have the specified file open when DISABLE.INDEX is issued continue to have indices updated.

Use LIST.INDEX to display the updating status of an index.

DISPLAY

Use DISPLAY to display a line of text on the terminal.

Syntax

DISPLAY *text*

Qualifier

text The text that appears on the terminal.

Example

This example uses DISPLAY in a paragraph:

```
     BALANCES
0001: PA
0002: DISPLAY PRINTING VENDOR LIST
0003: LIST PAYABLES WITH BAL.DUE = 0 LPTR
0004: DISPLAY PRINTING BALANCES
0005: LIST PAYABLES WITH BAL.DUE >= 10 LPTR
```

When you run this paragraph, it displays the following messages on the screen:

```
PRINTING VENDOR LIST
PRINTING BALANCES
```

Use DIVERT.OUT to begin diverting the output of subsequent commands to a record in a type 1 or type 19 file. Output continues to appear on the terminal unless you turn it off.

Syntax

DIVERT.OUT *action* [*filename record*] [*parameter*]

Qualifiers

filename	The name of an existing type 1 or type 19 file.
record	The name of a record in *filename* where the output is to be diverted.

action can be one of the following:

ON	Starts sending output to specified *record* in *filename*.
OFF	Stops copying terminal output.
FILE.OFF	Suspends current output diversion. Subsequent command output is not diverted until you enter a DIVERT.OUT FILE.ON command.
FILE.ON	Resumes output diversion previously suspended by the DIVERT.OUT FILE.OFF command.
TTY.OFF	Turns off terminal (tty) display of output and user input.
TTY.ON	Turns on terminal (tty) output display if it is disabled.

parameter can be any of the following keywords:

TTY.OFF	Turns off terminal (tty) display of output and user input.
TTY.ON	Turns on terminal (tty) output display.
TRUNCATE	Specifies that an existing record be replaced by the current diversion. Truncates any part of the existing record not overwritten by the current diversion.
APPEND	Adds current output diversion to the end of an existing record.

DIVERT.OUT

Description

DIVERT.OUT works like the COMO command, except that COMO automatically creates a &COMO& file if it does not exist, and COMO time-stamps the beginning and end of a COMO session.

If *record* already exists, specify either the APPEND keyword to append new output to the end of the record or the TRUNCATE keyword to completely overwrite the existing record.

COMO and DIVERT.OUT commands cannot be nested within one another.

Examples

```
>CREATE.FILE DIVERSION 1
Creating file "DIVERSION" as Type 1.
Creating file "D_DIVERSION" as Type 3, Modulo 1, Separation 2.
Added "@ID", the default record for RetrieVe, to "D_DIVERSION".
>DIVERT.OUT ON DIVERSION FIRST
>LIST SUN.MEMBER WITH FNAME EQ "EDGAR"
LIST SUN.MEMBER WITH FNAME EQ "EDGAR" 11:08:15am  20 Oct 1995  PAGE    1
MEMBER ID.     FIRST NAME    LAST NAME.     YEAR JOINED    INTERESTS......

4309           EDGAR         WILLIAMS              1984    FISHING
                                                             SAILING

1 records listed.
>DIVERT.OUT FILE.OFF
>TIME
11:08:16 20 OCT 1995
>DIVERT.OUT FILE.ON
>DATE
Wednesday, October 20, 1995  11:08am
>DIVERT.OUT OFF
```

This example establishes the record FIRST in the type 1 file named DIVERSION. Its contents are as follows:

```
001: >LIST SUN.MEMBER WITH FNAME EQ "EDGAR"
002:
003: LIST SUN.MEMBER WITH FNAME EQ "EDGAR" 11:08:16am  20 Oct 1995 PAGE   1
004: MEMBER ID.     FIRST NAME    LAST NAME.     YEAR JOINED    INTERESTS..
005:
006: 4309           EDGAR         WILLIAMS              1984    FISHING
007:                                                            SAILING
008:
009: 1 records listed.
010: >DIVERT.OUT FILE.OFF
011: >DATE
012: Wednesday, October 20, 1995  11:08am
013: >DIVERT.OUT OFF
```

DLIST

Use DLIST to display a listing of I-descriptor object code. DLIST displays the I-type expression followed by the lines of compiled code it generated. DLIST also displays statistics about the I-descriptor.

Syntax

DLIST *filename I-descriptor*

Qualifiers

filename The name of the file whose dictionary contains *I-descriptor*.

I-descriptor The record ID of the I-descriptor in the dictionary of *filename*.

Example

```
>DLIST TESTFILE WO.CODE.NUM

Item "WO.CODE.NUM": CONVERT("ABC","234", WO.CODE);IF NUM(@1)
THEN @1 ELSE 0;IF @ 2 THEN @2 ELSE 0

Compiled 16:51  25 JAN 95
3 expressions
0 TOTALS
5 constants

0000: 060 dyn_extract    @RECORD 3 0 0  => $R0
000C: 03C convert        “ABC” “234” $R0  => @1
0016: 110 num            @1  => $R0
001C: 1A0 testf          $R0 0030:
0024: 0F8 move           @1  => @2
002A: 0C2 jump           0036:
0030: 0F8 move           0  => @2
0036: 1A0 testf          @2 004C:
0040: 0F8 move           @2  => @3
0046: 0C2 jump           0052:
004C: 0F8 move           0  => @3
0052: 0F8 move           @3  => @ANS
0058: 15C return
```

Use DOS to invoke a DOS command shell from within UniVerse.

Syntax

DOS [**/c** *command* | *pathname*]

Qualifiers

command Specifies the command to execute.

pathname The pathname of a batch file or command file to execute.

Description

UNIX. The DOS command is supported only if you use a suitable emulator.

Example

```
>DOS /c DIR
```

ED

Use ED to invoke the UniVerse Editor.

Syntax

ED [**DICT**] [*filename*] [*records* | *]

Qualifiers

DICT	Edits records in the file dictionary.
filename	The name of an existing file.
records	The record IDs of the records you want to edit. Separate multiple records by spaces. You can also use an active select list. Do not specify an empty string as the record ID.
*	Specifies all records in the file.

Description

The Editor creates records, not files. You must first create files with CREATE.FILE.

Use the UniVerse Editor to create BASIC programs and create, change, or delete records in data files and file dictionaries. Each line listed by the Editor shows one field in a record.

If you enter **ED** with no qualifiers, UniVerse prompts for *filename* and a record ID. If you enter **ED *filename***, UniVerse prompts for a record ID. If you do not specify *filename* and select list 0 is active, ED uses the select list.

Use EDIT.LIST to edit the contents of a select list saved in the file &SAVEDLISTS&.

Syntax

EDIT.LIST [*listname*]

Qualifier

listname The name of the list you want to edit. Separate multiple list names with spaces, or use an active select list.

Description

EDIT.LIST lets you create, change or add to a list using the UniVerse Editor. EDIT.LIST is the same as ED using the filename &SAVEDLISTS& and the record ID of the list you want to edit.

If you do not specify *listname*, UniVerse prompts for it.

If you do not specify *listname* and select list 0 is active, EDIT.LIST uses the contents of the select list as the record IDs of the lists you want to edit.

ENABLE.INDEX

Use ENABLE.INDEX to reenable automatic updating of the secondary key indices of a file after the updating has been disabled by the DISABLE.INDEX command.

Syntax

ENABLE.INDEX [**DICT**] [*filenames*]

Qualifiers

DICT	Specifies the file dictionary.
filenames	The names of UniVerse files for which to enable secondary index updating. If you do not specify *filenames*, ENABLE.INDEX prompts for them.

Description

Automatic updating is initially enabled. After disabling it, you can reenable automatic updating with ENABLE.INDEX.

ENABLE.INDEX does not actually update the index entries. Use the UPDATE.INDEX command for this. You can use UPDATE.INDEX when automatic updating is enabled or when it is disabled.

If an indexed file is open when ENABLE.INDEX is issued, the indices are not immediately updated. Some inconsistencies could continue even after updating is enabled and the indices have been updated. See the UPDATE.INDEX command for a method of ensuring that the indices are up-to-date.

Use LIST.INDEX to display the updating status of an index.

Use ENABLE.RECOVERY to enable the transaction logging system. You must be a UniVerse Administrator logged in to the UV account to use this command.

Syntax

ENABLE.RECOVERY { **YES** | **NO** }

Qualifiers

YES	Retains the current logging info file.
NO	Removes the current logging info file.

Description

ENABLE.RECOVERY starts the log daemon *uvlogd*.

You should fully back up your UniVerse files before enabling transaction logging for the first time with ENABLE.RECOVERY or after SHUTDOWN.RECOVERY.

Example

This example starts the log daemon and retains the current logging info file *uvlogd.info*:

```
>ENABLE.RECOVERY YES
Request to Enable Logging Subsystem made at 12:51:52 on 01 OCT 1996.  You
can use the 'Display logging state' menu to verify the current state of
the logging subsystem.
```

ENVIRONMENT

Use ENVIRONMENT or ENV to set and display environment variables.

Syntax

ENV[**IRONMENT**] [**DISPLAY**]

ENV[**IRONMENT**] [**SET**] *env.variable=value*

ENV[**IRONMENT**] **CLEAR** *env.variable*

Qualifiers

DISPLAY	Lists the current environment settings.
SET	Sets the specified environment variable to *value*.
env.variable	The name of the environment variable you want to set or clear. *env.variable* names are case-sensitive.
value	The value to which you are setting *env.variable*. *value* can be of zero length.
CLEAR	Unsets the specified environment variable. If *env.variable* is not set, the CLEAR keyword does nothing.

Description

ENV prints variables containing control characters (that is, ASCII characters 0 through 26) as a caret (^) followed by the character. For example:

```
BELL=^G
```

Setting a variable to a zero-length value is different from unsetting it. For detailed information about environment variables, see your operating system documentation.

Examples

The ENVIRONMENT command with no options prints the current environment settings:

```
>ENVIRONMENT
LEVEL=--
TZ=EST5EDT
```

```
USER=todd
PATH=.:/u1/uv/bin:/bin:/src/upix/sp:/usr/bin:/usr/lbin:/etc
SHELL=/bin/csh
HOME=/usr/todd
```

Each of the next two examples sets the environment variable DISPLAY to "romero":

```
>ENV DISPLAY=romero
>ENVIRONMENT SET DISPLAY=romero
```

The next example sets the DISPLAY variable to an empty string:

```
>ENV DISPLAY=
```

The next example unsets the DISPLAY variable:

```
>ENV CLEAR DISPLAY
```

ESEARCH

Use ESEARCH to create a select list of records that contain an occurrence of a specified string. ESEARCH is a synonym for the SEARCH command.

Syntax

ESEARCH [**DICT** | **USING** [**DICT**] *dictname*] *filename* [*records* | **FROM** *n*]
[*selection*] [*output.limiter*] [*sort*] [**TO** *n*] [*options*]

Use EXCHANGE to switch the contents of one record with another record in a file.

Syntax

EXCHANGE [**DICT**] *filename record.a record.b*

Qualifiers

DICT	Specifies the file dictionary.
filename	The name of the file containing the records to be switched.
record	The name of a record whose contents will be switched with the contents of the other record.

Description

The EXCHANGE command is a proc that copies the contents of *record.a* into a temporary file, then copies the contents of *record.b* into *record.a*, and then copies the contents of the temporary file into *record.b*.

If one of the records does not exist in *filename*, EXCHANGE changes the name of the existing record to the name of the other record.

FANCY.FORMAT

Use FANCY.FORMAT to format BASIC source statements into a logical block structure by indenting lines and inserting space around arithmetic operators so that the program is easier to read.

Syntax

FANCY.FORMAT [*filename*] [*program* | *] [**–LIST**]

Qualifiers

filename	The name of the file containing the BASIC programs.
program	The name of the BASIC program. If select list 0 is active, you need not specify *program*.
*	Specifies all programs in the file.
–LIST	Prints the program on the printer.

Description

If you do not specify *filename* or *program*, FANCY.FORMAT prompts for them.

FANCY.FORMAT is like FORMAT, but it handles spacing on each line differently. For example, FANCY.FORMAT adds a space around the = sign.

Use FILE.STAT to get statistical information about static hashed files. FILE.STAT displays the file type, modulo, number of bytes in the file, number of records in the file, and number of groups in the file. The command also displays averages and lists the minimum and maximum number of bytes in a record.

Syntax

FILE.STAT [**DICT**] *filename* [[**DICT**] *filename*...] [**LPTR**]

Qualifiers

DICT	Specifies the file dictionary.
filename	The name of a UniVerse hashed file.
LPTR	Sends output to the printer.

Description

If you specify a type 1, type 19, type 25, or dynamic file (type 30), an error message appears.

If FILE.STAT does not provide the information that you need, try GROUP.STAT, GROUP.STAT.DETAIL, HASH.AID, HASH.HELP, HASH.HELP.DETAIL, HASH.TEST, or HASH.TEST.DETAIL. The GROUP.STAT commands report more details about data distribution in the file. The HASH.HELP commands recommend the file type, modulo, and separation, and the optimal combination for the file. The HASH.TEST commands let you test new file sizes. HASH.AID lets you test the file size and show additional file size information.

Use ANALYZE.FILE to get statistical information about dynamic files.

Example

The following listing is the output of FILE.STAT for the SUN.MEMBER data file:

```
>FILE.STAT SUN.MEMBER
File name                           = SUN.MEMBER
File type                           = 2
Number of groups in file (modulo)   = 2
Separation                          = 2
Number of records                   = 13
Number of physical bytes            = 3072
Number of data bytes                = 1240
```

```
Average number of records per group  = 6.5000
Average number of bytes per group    = 620.0000
Minimum number of records in a group = 6
Maximum number of records in a group = 7

Average number of bytes per record   = 95.3846
Minimum number of bytes in a record  = 80
Maximum number of bytes in a record  = 120

Average number of fields per record  = 10.0000
Minimum number of fields per record  = 10
Maximum number of fields per record  = 10

Groups  25%    50%    75%   100%   125%   150%   175%   200% full
          0      0      2      0      0      0      0      0
```

Use FILE.USAGE to list file usage statistics for any static hashed file.

Syntax

FILE.USAGE [**DICT**] [*filenames*]

Qualifiers

DICT	Specifies the file dictionary.
filenames	A list of filenames separated by spaces. If you do not specify *filenames*, FILE.USAGE prompts for them. If a select list is active, you need not specify *filename*.

Description

The FILE.USAGE report contains the following data:

Reads for update	The number of locked reads attempted of the file. The BASIC READU statement increments this field. This field also displays the percentage of total reads.
Blocked reads	The number of locked reads of the file that fail because the file is locked by another user. This field also displays the percentage of total reads.
Read sharelocks	The number of locked reads attempted of the file. The BASIC READL statement increments this field. This field also displays the percentage of total reads.
Blocked sharelocks	The number of locked reads of the file that fail because the file is exclusively locked by another user. This field also displays the percentage of total reads.
Oversized reads	The number of reads of the file of data records too large to fit in a single group buffer. This field also displays the percentage of total reads.
Total reads	The sum of all reads of the file.
Writes for update	The number of writes to the file that preserve the update lock on the file. The BASIC WRITEU statement increments this field. This field also displays the percentage of total writes.

Update writes	The number of writes to the file while the file had an update lock set. This field also displays the percentage of total writes.
Blocked writes	The number of writes to the file that fail because the file is locked by another user. This field also displays the percentage of total writes.
Oversized writes	The number of writes to the file of data too large to fit in a single group buffer. This field also displays the percentage of total writes.
Total writes	The sum of all writes to the file.
Total selects	The number of times a select has been performed on the file. If the select was performed using a secondary index, this field is incremented for the index file, but not for the data file.
Total deletes	The number of times a delete has been performed on the file.
Total clears	The number of times the file has been cleared.
Total opens	The number of times the file has been opened.
Overflow buffer scans	The number of times overflow group buffers have been accessed in the file.
Buffer compactions	The number of space recovery group buffer compactions done in the file.

A file's usage statistics are reset by a RESIZE operation or by FILE.USAGE.CLEAR. Use the FILE.USAGE.CLEAR command to start collecting file usage statistics on a file. Use FILE.USAGE.OFF to disable collection of file usage statistics. You must have write permission on a file to collect its statistics.

FILE.USAGE.CLEAR

Use FILE.USAGE.CLEAR to reset the file usage statistics displayed by the FILE.USAGE command. You must have write permission on a file to collect its statistics.

Syntax

FILE.USAGE.CLEAR [**DICT**] [*filenames*]

Qualifiers

DICT Specifies the file dictionary.

filenames A list of filenames separated by spaces. If you do not specify *filenames*, FILE.USAGE.CLEAR prompts for them. If a select list is active, you need not specify *filenames*.

FILE.USAGE.OFF

Use FILE.USAGE.OFF to disable collection of file usage statistics displayed by the FILE.USAGE command. You must have write permission on a file to use this command.

Syntax

FILE.USAGE.OFF [**DICT**] [*filenames*]

Qualifiers

DICT Specifies the file dictionary.

filenames A list of filenames separated by spaces for processing. If you do not specify *filenames*, FILE.USAGE.OFF prompts for them. If a select list is active, you need not specify *filenames*.

Use FORM.LIST to create a select list from a list of data elements stored in a record. A select list created by FORM.LIST is the same as one created by SELECT or SSELECT.

Syntax

FORM.LIST [*filename*] [*record*] [**TO** *n*]

Qualifiers

filename	The file containing *record*.
record	The record ID of the record whose elements are to make up the select list.
TO *n*	Creates a numbered select list. *n* specifies the list number from 0 through 10. If you omit the TO clause, FORM.LIST creates select list 0.

Description

If you enter FORM.LIST without specifying *filename* or *record*, FORM.LIST prompts for them.

You can use a BASIC program, an editor, or REVISE to create the record containing list elements. Separate elements with newlines if the file is a type 1 or type 19 file. Separate elements with field marks if the file is hashed.

Example

This example creates an active select list from the record LIST1 in the file LISTS, and waits for a command to use the select list:

```
>FORM.LIST LISTS LIST1

126 record(s) selected to SELECT list #0
>>
```

FORMAT

Use FORMAT to format BASIC source statements into a logical block structure by indenting lines so that the program is easier to read.

Syntax

FORMAT [*filename*] [*program* | *] [–**LIST**]

Qualifiers

filename	The name of the file containing the BASIC programs.
program	The name of the BASIC program. If select list 0 is active, you need not specify *program*.
*	Specifies all programs in the file.
–LIST	Prints the program on the printer.

Description

If you do not specify *filename* or *program*, FORMAT prompts for both. If you specify *filename* but not *program*, FORMAT prompts for *program*.

FORMAT is like FANCY.FORMAT, but it handles spacing on each line differently. For example, FORMAT does not add spaces around the = sign.

FORMAT performs the same function as the FORMAT command of the UniVerse Editor.

Examples

To format and print a BASIC program, enter the following:

```
>FORMAT ACCOUNTS ACCOUNTING.LEDGERS -LIST
```

If you enter **FORMAT** with no qualifiers, FORMAT prompts you:

```
>FORMAT
File name     = FILE1
Spool to printer (Y/N)? N
Record name = A
5 lines long.

Formatting item "A".
```

```
File name     = FILE1
Record name =
```

After formatting record A, FORMAT prompts you to enter another record ID. Press **Return** to stop formatting programs.

Here is an unformatted program:

```
FOR X = 1 TO 10
PRINT X
NEXT X
STOP
```

After using the FORMAT command, the program looks like this:

```
FOR X = 1 TO 10
   PRINT X
NEXT X
STOP
```

FORMAT.CONV

Use FORMAT.CONV to change the format of UniVerse files or BASIC object code from one machine's storage format to another. Use this command when you want to transfer data files between machines with different architectures.

Syntax

FORMAT.CONV [*options*] *pathname*

Qualifiers

pathname is the relative or absolute pathname of the file you want to convert.

options must be in lowercase and can be one or more of the following:

–m*class*	Converts a file to the format specified by machine class. *class* can be 0, 1, or 16. See "Description" for a list of machine classes. If you specify multiple options, you must specify the –*m* option last.
–u	Converts a file to low-order byte addressing format (big-endian). The –*u* option assumes a machine class of 0 (zero) for BASIC object code, or a class of 0 or 16 for a UniVerse file. The –*u* option is the same as –*m*0.
–x	Converts a file to high-order byte addressing format (little-endian). The –*x* option assumes a machine class of 1. The –*x* option is the same as –*m*1.
–6	Converts a data file of a later release format to the format of the current machine.
–s	(Silent) Suppresses terminal output.
–v	(Verbose) Displays output. This is the default.

Description

If you do not specify –*m*, –*u*, or –*x*, FORMAT.CONV converts the file to the format of the current machine.

FORMAT.CONV changes the file's physical format by reversing the byte-ordering. It does not change the logical contents of files. You can convert the file and transport it to the target machine, or you can transport the file and convert it on the target machine.

The file formats are different on Release 6 and later systems; therefore, the formats are not backward compatible. To use data files created on a later release on a system using an earlier release, you must convert the files using the *–6* option.

Note: The *–6* option converts only data files to the format of an earlier release. Because it does not convert object code, you need to recompile any BASIC programs created on a later release.

The following table lists hardware platforms supported for Release 9 of UniVerse. Use this table to identify your machine class. The VMARK version code is on your installation tape.

Machine Class	Supported Hardware Platforms	VMARK Version Code
0	IBM RS/6000	uv-029, uv-093,
	MIPS M/120/2000	uv-063
	Pyramid S-Series	uv-082
	Sequoia Series 40/400	uv-048
	Silicon Graphics	uv-087, uv-089
	Tandem Integrity S2	uv-014
1	DEC Alpha AXP	uv-006
	DECstation/system 2100, 3100, 5xxx	uv-007, uv-017
	NCR System 3000	uv-028
	SCO UnixWare	uv-004
	SCO UNIX System V/386/486 cpu	uv-062
	Sequent Symmetry /ptx	uv-083
	Unisys 6000/65	uv-036
	Windows NT	
16	Data General AViiON	uv-047, uv-061
	Encore, Series 91	uv-034
	HP 9000 Series 8xx	uv-069
	ICL DRS6000	uv-046
	Motorola M88000	uv-052, uv-084
	Sun Solaris	uv-024

If you are running on a UNIX system, you can use the UNIX command *format.conv* to change the file format from a UNIX shell.

Examples

This example converts the CUSTOMERS file to the format of the current machine:

```
>FORMAT.CONV CUSTOMERS
```

The next two examples convert the ORDERS data file to low-order byte addressing format:

```
>FORMAT.CONV -u ORDERS
```

```
>FORMAT.CONV -m0 ORDERS
```

The next example converts the ORDERS file to Release 6 format for a class 1 machine:

```
>FORMAT.CONV -6m1 ORDERS
```

Use GET.LIST to activate a saved select list.

Syntax

GET.LIST [[*filename*] *listname*] [**TO** *list#*]

Qualifiers

filename The name of a file in which the list is saved. The &SAVEDLISTS& file is the default.

listname The name of the list to be recalled. If you do not include *listname*, GET.LIST activates the list called &TEMP*port#*&, where *port#* is the one- or two-digit identifier of the terminal you are logged in on.

TO *list#* The select list number to assign the list to. If you do not use a TO clause, GET.LIST uses select list 0.

Description

Activating a select list makes it available to BASIC READNEXT statements, control level commands, data management commands, and RetrieVe commands. After you execute GET.LIST, a message confirms that the list is active.

Example

```
>SELECT SUN.MEMBERS WITH LNAME EQ WILLIAMS TO 1

2 record(s) selected to SELECT list #1.
>SAVE.LIST WILLIAMS FROM 1

2 record(s) SAVEd to SELECT list "WILLIAMS".
>GET.LIST WILLIAMS

2 record(s) selected to SELECT list #0.
>>LIST SUN.MEMBERS
LIST SUN.MEMBERS 11:07:42am  20 Oct 1995  PAGE    1
MEMBER ID.     FIRST NAME    LAST NAME.     YEAR JOINED    INTERESTS......

7100           ALICE         WILLIAMS              1984    HANG-GLIDING
                                                           WINDSURFING
4309           EDGAR         WILLIAMS              1984    FISHING
                                                           SAILING
2 records listed.
```

GET.STACK

Use GET.STACK to retrieve a saved sentence stack from the &SAVEDLISTS& file and load it into the current sentence stack.

Syntax

GET.STACK [*listname*]

Qualifier

listname The name of a saved sentence stack.

Example

```
>GET.STACK MGR.STACK
Command stack "MGR.STACK" loaded
```

Use GET.TERM.TYPE to display your terminal type, model, and description.

Syntax

GET.TERM.TYPE [**HUSH**]

Qualifier

HUSH Suppresses terminal output. Use HUSH if you want to capture output in a BASIC program.

Description

The terminal type is set by a SET.TERM.TYPE command or from the TERM environment variable if no SET.TERM.TYPE command was executed.

Here are some possible terminal types:

Terminal Type	Description
a210	Ampex 210
vp	ADDS Viewpoint
regent25	ADDS Regent 25
vp60	ADDS Viewpoint 60
hz1410	Hazeltine 1400
hz1500	Hazeltine 1500
adm5	Lear Siegler ADM 5
tvi925	Televideo 925
tvi955	Televideo 955
wy50	Wyse Technology 50
wy200	Wyse Technology 200
wy300	Wyse Technology 300
dumb	dumb terminal

The terminal type is the name of the file in the directory */usr/lib/terminfo/*x that contains the terminal definition, where *x* is the first character of the code. For example, the *terminfo* entry for terminal a210 is located in */usr/lib/terminfo/a/a210*.

Example

This example shows that the user's terminal is defined as an 80-column by 40-line aiXterm that can display variable-width fonts. The terminal type is *uviterm-v*. The second and third lines show the current terminal display settings as set by the TERM command.

```
>GET.TERM.TYPE
80x40 aiXterm for UniVerse(variable font) (uviterm-v)
Width : 79
Depth : 40
>
```

Use GO in a paragraph to transfer execution to a subsequent sentence in the paragraph with *label* as its statement label.

Syntax

GO *label* [**:**]

Qualifier

label The statement label. If you do not specify *label*, execution continues with the next statement. In a GO statement, the label need not end with a colon.

Description

The labelled statement must follow the GO statement or the remaining statements will be skipped. You can use the GO statement in an IF statement to exit a loop.

Use GO statements only in paragraphs. It has no function on the command line.

Using Labels. Use labels in a paragraph to uniquely identify a sentence in a paragraph. The syntax of a labelled sentence is as follows:

label: [*sentence*]

A label can be all numbers or it can be any combination of letters, numbers, dollar signs, and periods. It must begin with a letter and end with a colon. A label can be on the same line as a statement, or it can be on a line by itself. You must follow the colon in a label by a space, whether it is on the same line as a sentence or on a line by itself.

You can use labels only in paragraphs. They have no function on the command line.

Example

This example represents a paragraph as it appears in a VOC file:

```
     PAYABLES
0001: PA
0002: IF <<ENTER VENDOR>> = '' THEN GO END
0003: LIST PAYABLES <<ENTER VENDOR>> AMT.PD PYMT.DATE
0004: END: DISPLAY Done
```

GROUP.STAT

Use GROUP.STAT to produce a summary of the record distribution for a hashed file. This command analyzes the structure of groups within a file. It produces a record distribution summary that can help you determine whether the current file structure is the best one.

Syntax

GROUP.STAT [**DICT**] *filename* [**NO.PAGE**] [**LPTR**]

Qualifiers

DICT	Specifies the file dictionary.
filename	The name of the file.
NO.PAGE	Suppresses automatic paging.
LPTR	Sends output to the printer.

Description

If you do not include *filename* and a select list is active, GROUP.STAT analyzes the files specified by the list.

If you specify a nonhashed file, an error message appears.

Use GROUP.STAT.DETAIL for more information about a file.

Example

GROUP.STAT produces a summary that look like this:

```
>GROUP.STAT SUN.MEMBERS
 Type description= Hashed, keys end in numbers.
 Bytes  Records     File= SUN.MEMBERS  Modulo= 2  Sep= 2  Type= 2
   668      7 >>>>>>>
   572      6 >>>>>>
======  ====
  1240     13  Totals
   620      6  Averages per group
    48      0  Standard deviation from average
   7.7    0.0  Percent std dev from average
```

Use GROUP.STAT.DETAIL when you want more detailed information about hashed files than GROUP.STAT provides. This command analyzes the structure of groups within the file. It displays the record ID and number of bytes for each record in each group, that can help you determine whether the current file structure is the best one for this file.

Syntax

GROUP.STAT.DETAIL [**DICT**] [*filename*] [**NO.PAGE**] [**LPTR**]

Qualifiers

DICT	Specifies the file dictionary.
filename	The name of the file.
NO.PAGE	Suppresses automatic paging.
LPTR	Sends output to the printer.

Description

If you do not include *filename* and a select list is active, GROUP.STAT.DETAIL analyzes the filenames specified by the list.

If you specify a nonhashed file, an error message appears.

Example

GROUP.STAT.DETAIL produces a summary that looks like this:

```
>GROUP.STAT.DETAIL SUN.MEMBERS
 Type description= Hashed, keys end in numbers.
 Bytes  Record.id   File= SUN.MEMBERS Modulo= 2  Sep= 2  Type= 2
    88  2342
    92  3452
   112  4102
   100  4108
    92  5390
    80  6100
   104  7100
------
   668 Bytes     7 Records in Group 1
```

```
     88  4309
    100  4439
     92  5205
     92  6203
     80  6783
    120  7505
------
    572 Bytes     6 Records in Group 2

  Bytes  Records
   1240    13  Totals
    620     6  Averages per group
     48     0  Standard deviation from average
    7.7   0.0  Percent std dev from average
```

Use HASH.AID to experiment with the file type, modulo, and separation for a hashed file and produce a summary of the new record distribution.

Syntax

HASH.AID [**DICT**] [*filename*] [*type*] [*modulo*] [*separation*] [**NO.PAGE**] [**LPTR**]

Qualifiers

DICT	Specifies the file dictionary.
filename	The name of the file.
type	A number from 2 through 18, specifying one of the file types, or *, specifying the existing file type. You can also specify *type* as a control variable for a loop. See "Description" for details.
modulo	An integer from 1 through 8,388,608 defining the number of groups in the file, or *, specifying the existing modulo. You can also specify *modulo* as a control variable for a loop. See "Description" for details.
separation	An integer from 1 through 8,388,608 that specifies the group buffer size in 512-byte blocks, or *, specifying the existing separation. You can also specify *separation* as a control variable for a loop. See "Description" for details.
NO.PAGE	Suppresses automatic paging.
LPTR	Sends output to the printer.

Description

If you do not include *filename*, *type*, or *modulo* in the command line, HASH.AID prompts for them. You can enter the value for *type*, *modulo*, and *separation* as control variables for a loop. When you do that, enter the value as follows:

begin,*end*,*increment*

begin is the first number to be tried, *end* is the last, and *increment* is an integer. For *type*, the *begin* and *end* numbers must be from 2 through 18. For example, if you enter **`HASH.AID SUN.MEMBER 2,3,1 *`**, HASH.AID produces two summaries, one using type 2 and the current modulo and one using type 3 and the current modulo.

To keep the existing file type, modulo, or separation, enter ***** instead of a number as the qualifier in the command line. If you are using the prompting method, enter ***** when the prompt for the qualifier you do not want to change appears.

If you specify a nonhashed file, an error message appears.

HASH.AID displays a FILE.STAT of the file being tested and also saves a summary of this information in a file called HASH.AID.FILE. To display this summary, enter the following:

```
>LIST HASH.AID.FILE WITH FILE.NAME = filename
```

Example

This is the report HASH.AID displays on the terminal:

```
>HASH.AID SUN.MEMBER 3 3,7,2 4 NO.PAGE
File name                           = SUN.MEMBER
File type, modulo, and separation   = 3, 3, 4
Number of records                   = 13
Number of physical bytes            = 8192
Number of data bytes                = 1240

Average number of records per group  = 4.3333
Minimum number of bytes per group    = 172
Maximum number of bytes per group    = 688
Average number of bytes per group    = 413.3333
Minimum number of records in a group = 2
Maximum number of records in a group = 7

Average number of bytes per record   = 95.3846
Minimum number of bytes in a record  = 80
Maximum number of bytes in a record  = 120

Average number of fields per record  = 10.0000
Minimum number of fields per record  = 10
Maximum number of fields per record  = 10

Groups  25%    50%    75%   100%   125%   150%   175%   200% full
          2      1      0      0      0      0      0      0
File name                           = SUN.MEMBER
File type, modulo, and separation   = 3, 5, 4
Number of records                   = 13
Number of physical bytes            = 12288
Number of data bytes                = 1240

Average number of records per group  = 2.6000
```

```
Minimum number of bytes per group    = 188
Maximum number of bytes per group    = 488
Average number of bytes per group    = 248.0000
Minimum number of records in a group = 2
Maximum number of records in a group = 5

Average number of bytes per record   = 95.3846
Minimum number of bytes in a record  = 80
Maximum number of bytes in a record  = 120

Average number of fields per record  = 10.0000
Minimum number of fields per record  = 10
Maximum number of fields per record  = 10

Groups  25%    50%    75%   100%   125%   150%   175%   200% full
          5      0      0      0      0      0      0      0
File name                            = SUN.MEMBER
File type, modulo, and separation    = 3, 7, 4
Number of records                    = 13
Number of physical bytes             = 16384
Number of data bytes                 = 1240

Average number of records per group  = 1.8571
Minimum number of bytes per group    = 100
Maximum number of bytes per group    = 404
Average number of bytes per group    = 177.1429
Minimum number of records in a group = 1
Maximum number of records in a group = 4

Average number of bytes per record   = 95.3846
Minimum number of bytes in a record  = 80
Maximum number of bytes in a record  = 120

Average number of fields per record  = 10.0000
Minimum number of fields per record  = 10
Maximum number of fields per record  = 10

Groups  25%    50%    75%   100%   125%   150%   175%   200% full
          7      0      0      0      0      0      0      0
```

HASH.HELP

Use HASH.HELP to determine the most efficient file structure for a hashed file. HASH.HELP analyzes the file type, modulo, and separation of an existing file by examining every record ID and record in the file. It determines which record type is most common throughout the file and recommends a file type and modulo.

Syntax

HASH.HELP [**DICT**] [*filename*] [**NO.PAGE**] [**LPTR**]
[**PERCENT.GROWTH** *n*]

Qualifiers

DICT Specifies the file dictionary.

filename The name of the file.

NO.PAGE Suppresses automatic paging.

LPTR Sends output to the printer.

PERCENT.GROWTH
Specifies that the recommendation should be based on *n*% more records than exist currently in the file. HASH.HELP assumes that the distribution of the additional records is the same as the existing ones.

Description

The HASH.HELP recommendation is based on the averages of the existing records. The modulo it recommends is the minimum modulo and may be smaller than needed. Use the PERCENT.GROWTH keyword to size the file for anticipated growth.

After using HASH.HELP, use HASH.TEST to experiment with the recommended numbers.

Use HASH.HELP.DETAIL to get more information about a file.

If you specify a nonhashed file, an error message appears.

Example

HASH.HELP produces a summary that looks like this:

```
>HASH.HELP SUN.MEMBERS
File SUN.MEMBERS  Type= 2  Modulo= 2  Sep= 2      11:08:39am  20 Oct 1995
PAGE    1

Of the 13 total keys in this file:

   13  keys were wholly numeric (digits 0 thru 9)
       (Use File Type 2, 6, 10 or 14 for wholly numeric keys)

    0  keys were numeric with separators (as reproduced below)
       0123456789#$%&*+-./:;_
       (Use File Type 3, 7, 11 or 15 for numeric keys with separators)

    0  keys were from the 64-character ASCII set reproduced below
       !"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[ \ ]^_`
       (Use File Type 4, 8, 12 or 16 for 64-character ASCII keys)

    0  keys were from the 256-character ASCII set
       (Use File Type 5, 6, 13 or 17 for 256-character ASCII keys)

The keys in this file are more unique in their right-most eight bytes.
The smallest modulo you should consider for this file is 3.
The smallest separation you should consider for this file is 1.
The best type to choose for this file is probably type 2.
```

HASH.HELP.DETAIL

Use HASH.HELP.DETAIL to determine the most efficient file structure for a hashed file. HASH.HELP examines every record ID and record in the file. It determines which record type is most common throughout the file and recommends a file type and modulo.

Syntax

HASH.HELP.DETAIL [**DICT**] [*filename*] [**NO.PAGE**] [**LPTR**]

Qualifiers

DICT	Specifies the file dictionary.
filename	The name of the file.
NO.PAGE	Suppresses automatic paging.
LPTR	Sends output to the printer.

Description

In addition to the key and record information that HASH.HELP provides, HASH.HELP.DETAIL also provides the smallest, largest, and average record ID and record data sizes.

The recommendation is based on the averages of the existing records. The recommended modulo is the minimum modulo and may be smaller than needed. To get an alternate recommendation, use HASH.HELP with the PERCENT.GROWTH keyword.

After using HASH.HELP.DETAIL, use HASH.TEST to experiment with the recommended numbers.

If you specify a nonhashed file, an error message appears.

Example

HASH.HELP.DETAIL produces a summary that looks like this:

```
>HASH.HELP.DETAIL SUN.MEMBERS
File SUN.MEMBERS  Type= 2  Modulo= 2  Sep= 2      11:08:43am  20 Oct 1995
PAGE    1

      13  total keys in file
      52  total bytes in all keys
       4  smallest key
       4  largest key
    4.00  average bytes per key

      13  total records in file
    1240  total bytes in all records
      80  smallest record
     120  largest record
   95.38  average bytes per record

       4  average records per group  (optimized)
     413  average bytes per group  (optimized)

File SUN.MEMBERS  Type= 2  Modulo= 2  Sep= 2      11:08:43am  20 Oct 1995
PAGE    2

Of the 13 total keys in this file:

   13  keys were wholly numeric (digits 0 thru 9)
       (Use File Type 2, 6, 10 or 14 for wholly numeric keys)

    0  keys were numeric with separators (as reproduced below)
       0123456789#$%&*+-./:;_
       (Use File Type 3, 7, 11 or 15 for numeric keys with separators)

    0  keys were from the 64-character ASCII set reproduced below
       !"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[ \ ]^_`
       (Use File Type 4, 8, 12 or 16 for 64-character ASCII keys)

    0  keys were from the 256-character ASCII set
       (Use File Type 5, 6, 13 or 17 for 256-character ASCII keys)

The keys in this file are more unique in their right-most eight bytes.
The smallest modulo you should consider for this file is 3.
The smallest separation you should consider for this file is 1.
The best type to choose for this file is probably type 2.
```

HASH.TEST

Use HASH.TEST to experiment with a file type, modulo, and separation recommended by HASH.HELP or HASH.HELP.DETAIL and produce a summary of the new record distribution.

Syntax

HASH.TEST [**DICT**] [*filename*] [*type*] [*modulo*] [*separation*]
[**NO.PAGE**] [**LPTR**]

Qualifiers

DICT	Specifies the file dictionary.
filename	The name of the file.
type	A number from 2 through 18, specifying one of the file types, or *, specifying the existing file type. You can also specify *type* as a control variable for a loop. See "Description" for details.
modulo	An integer from 1 through 8,388,608 defining the number of groups in the file, or *, specifying the existing modulo. You can also specify *modulo* as a control variable for a loop. See "Description" for details.
separation	An integer from 1 through 8,388,608 that specifies the group buffer size in 512-byte blocks, or *, specifying the existing separation. You can also specify *separation* as a control variable for a loop. See "Description" for details.
NO.PAGE	Suppresses automatic paging.
LPTR	Sends output to the printer.

Description

If you do not include the filename, type, or modulo in the command line, you are prompted for the missing information.

To keep the existing file type, modulo, or separation, enter ***** instead of a number as the qualifier in the command line or at the prompt.

You can enter the value for type, modulo, and separation as control variables for a loop. When you do that, enter the value as follows:

begin,*end*,*increment*

begin is the first number to be tried, *end* is the last, and *increment* is an integer. For *type*, the *begin* and *end* numbers must be from 2 through 9. For example, if you enter **`HASH.TEST SUN.MEMBER 2,3,1 *`**, HASH.TEST produces two summaries, one using type 2 and the current modulo and one using type 3 and the current modulo.

If you specify a nonhashed file, an error message appears.

Use HASH.TEST.DETAIL to generate additional information about a file.

Example

HASH.TEST produces a summary that looks like this:

```
>HASH.TEST SUN.MEMBERS
File type        = 2
Modulo           = 5
Separation       = 1
Type description= Hashed, keys end in numbers.
 Bytes  Records     File= SUN.MEMBERS  Modulo= 5  Sep= 1  Type= 2
   488     5 >>>>>
     0     0
   292     3 >>>
   272     3 >>>
   188     2 >>
======  ====
  1240    13  Totals
   248     2  Averages per group
   158     1  Standard deviation from average
  63.7  38.5  Percent std dev from average
```

HASH.TEST.DETAIL

Use HASH.TEST.DETAIL to experiment with a file type, modulo, and separation recommended by HASH.HELP or HASH.HELP.DETAIL and produce a detailed summary of the new record distribution, including the size of each group.

Syntax

HASH.TEST.DETAIL [**DICT**] [*filename*] [*type*] [*modulo*] [*separation*] [**NO.PAGE**] [**LPTR**]

Qualifiers

DICT	Specifies the file dictionary.
filename	The name of the file.
type	A number from 2 through 18, specifying one of the file types, or *, specifying the existing file type. You can also specify *type* as a control variable for a loop. See “Description” for details.
modulo	An integer from 1 through 8,388,608 defining the number of groups in the file, or *, specifying the existing modulo. You can also specify *modulo* as a control variable for a loop. See “Description” for details.
separation	An integer from 1 through 8,388,608 that specifies the group buffer size in 512-byte blocks, or *, specifying the existing separation. You can also specify *separation* as a control variable for a loop. See “Description” for details.
NO.PAGE	Suppresses automatic paging.
LPTR	Sends output to the printer.

Description

If you do not include the filename, type, or modulo in the command line, you are prompted for the missing information.

To keep the existing file type, modulo, or separation, enter ***** instead of a number as the qualifier in the command line or at the prompt.

You can enter the value for type, modulo, and separation as control variables for a loop. When you do that, enter the value as follows:

begin,*end*,*increment*

begin is the first number to be tried, *end* is the last, and *increment* is an integer. For *type*, the *begin* and *end* numbers must be from 2 through 9. For example, if you enter **HASH.TEST.DETAIL SUN.MEMBER 2,3,1 ***, HASH.TEST.DETAIL produces two summaries, one using type 2 and the current modulo and one using type 3 and the current modulo.

If you specify a nonhashed file, an error message appears.

Example

HASH.TEST.DETAIL produces a summary that looks like this:

```
>HASH.TEST.DETAIL SUN.MEMBERS
File type        = 2
Modulo           = 5
Separation       = 1
Type description= Hashed, keys end in numbers.
 Bytes  Records     File= SUN.MEMBERS  Modulo= 5  Sep= 1  Type= 2
   120  7505
    92  5205
   104  7100
    80  6100
    92  5390
------
   488 Bytes     5 Records in Group 1

------
     0 Bytes     0 Records in Group 2

   112  4102
    92  3452
    88  2342
------
   292 Bytes     3 Records in Group 3

    80  6783
    92  6203
   100  4108
------
   272 Bytes     3 Records in Group 4
```

```
   100  4439
    88  4309
------
   188 Bytes     2 Records in Group 5

Bytes  Records
  1240    13  Totals
   248     2  Averages per group
   158     1  Standard deviation from average
  63.7  38.5  Percent std dev from average
```

Use HELP to display a description of a UniVerse command or keyword, a conversion code, a BASIC statement or function, a UniVerse SQL statement, or a BASIC SQL Client Interface function.

Syntax

HELP [**BASIC** | **CONV** | **PICK** | **SQL** | **BCI** | *helpfile*] [*item* | *]

HELP [*item*] **FROM** *helpfile*

Qualifiers

BASIC — Lists help about the BASIC command. Followed by the name of a BASIC statement or function, the BASIC keyword specifies help for a BASIC statement or function.

CONV — Specifies help for conversion codes. If you do not specify *item*, CONV lists all conversion codes. If you specify a conversion code as *item*, help for that code is listed.

PICK — Specifies help for PICK, REALITY, and IN2 flavor accounts. If you do not specify *item*, PICK lists commands with PICK-flavor-specific differences. If you specify a command as *item*, help for that command is listed.

SQL — Specifies help for SQL statements. If you do not specify *item*, SQL lists all SQL statements. If you specify an SQL statement as *item*, help for that statement is listed.

BCI — Specifies help for BASIC SQL Client Interface functions. If you do not specify *item*, BCI lists all SQL Client Interface functions. If you specify a function as *item*, help for that function is listed.

helpfile — Specifies one of the system help files:

BASIC.HELP	BCI.HELP
CONV.HELP	PICK.HELP
SQL.HELP	SYS.HELP

item — The name of a UniVerse command or keyword, a BASIC statement or function, a conversion code, an SQL statement, or a UniVerse BASIC SQL Client Interface function.

*	Lists all items specified by the preceding keyword. If you do not include a keyword in the command line, * lists help items for UniVerse commands and keywords.
FROM *helpfile*	Specifies one of the system help files.

If you include *item* in the command line, UniVerse displays the description of that command, statement, or keyword. If you enter **HELP** with no options, you get a list of UniVerse commands for which there is online help.

Description

You can also get help by entering **?item**. If field 1 in a record in the VOC file contains a description, **?item** displays it.

Some commands, statements, and keywords have more than one help entry. To display more help, select the **End Help** option at the bottom of the help screen.

UniVerse supplies the following help files: BASIC.HELP, BCI.HELP, CONV.HELP, PICK.HELP, SQL.HELP, and SYS.HELP. They contain all the descriptions for system commands and functions, conversion codes, and BASIC statements and functions. A UniVerse Administrator can create a USER.HELP file to include descriptions of special commands, sentences, programs, and files that are unique to your system. To create the USER.HELP file, begin by examining the SYS.HELP file. Then use CREATE.FILE to create a file called USER.HELP and follow the format of SYS.HELP for your help descriptions.

Examples

This example lists UniVerse commands and keywords for which there is online help:

```
>HELP
```

The next example displays help for the COPY command:

```
>HELP COPY
```

The next example displays help for the BASIC LOCATE statement:

```
>HELP BASIC LOCATE
```

The next example displays help for the T*file* conversion:

```
>HELP CONV Tfile
```

Use HUSH to suppress all text normally sent to the screen during processing.

Syntax

HUSH [**ON** | **OFF**]

Qualifiers

ON	Suppresses display of all terminal output, including error messages and prompts for input.
OFF	Enables display of terminal output.

Description

You might use this command when you are transmitting information over phone lines or when you are sending data to a hard-copy terminal. Both these situations result in slower transmission speeds. The unnecessary data display makes the task even slower.

HUSH acts as a toggle. If you enter HUSH without a qualifier, it changes the current state.

Do not use this command to shut off output display unless you are sure it is unnecessary. When you use HUSH ON, all output display is suppressed, including error messages and requests for information.

IAM

Use IAM to change the name of your account directory.

Syntax

IAM *account.dir*

Qualifier

account.dir The account directory name you want to use.

Description

Some commands require an account directory name. CATALOG, for example, uses the account directory name as part of the name of a cataloged program when you use normal cataloging.

When you enter the UniVerse environment, UniVerse sets your account directory name to the current directory name. When you use the LOGTO command, your account directory name is set to the name of the directory of the account you log to. Use IAM to change the account directory name so that commands like CATALOG use the name you specify.

Use WHO to see what the current account directory name is. It is helpful to use WHO before and after IAM.

IAM does not change your working directory. Use CHDIR or LOGTO to change your working directory.

Example

This example uses WHO to display the user's terminal number (*38*), account directory (*uv*), and login name (*ken*). The user changes the account directory name to *mark* and uses WHO again to confirm the change.

```
>WHO
38 uv From ken
>IAM mark
>WHO
38 mark From ken
```

UniVerse uses *mark* as the account directory name when a command requires it. For instance, if you use the CATALOG command to catalog programs normally, it uses *mark* instead of *uv* as the account directory name.

Use IF in a paragraph to change the operation sequence. The IF statement introduces a test whose results determine the next action. You must use an IF statement in a loop to end the loop (see "Example"). IF statements have no function on the command line.

Syntax

IF *expression* **THEN** *sentence*

Qualifiers

expression The test to be performed. Its syntax is *value1 operator value2*.

- *value1* An in-line prompt specification, @variable, or constant. In a loop, use control option A in the in-line prompting expression (see << ... >>) to issue the prompt every time the loop executes the IF statement, otherwise the loop issues the prompt only once.
- *operator* Any relational operator. For a complete list, see Chapter 2.
- *value2* Must be a constant, an @variable, or an in-line prompt.

sentence The sentence to execute if *expression* evaluates to TRUE.

Example

This example shows a paragraph as it appears in the VOC file:

```
001: PA
002: LOOP
003: IF <<A, End of Month (Y or N)>> = 'Y' THEN GO MONTH
004: LIST <<A, Enter filename>> VENDOR AMT.PAID PYMT.DATE AMT.DUE
005: REPEAT
006: MONTH: EOM.REPORT
007: END: DISPLAY Done
```

INITIALIZE.CATALOG

Use INITIALIZE.CATALOG to delete the system catalog space and reinitialize it. You must be a UniVerse Administrator in the UV account to use this command.

Syntax

INITIALIZE.CATALOG [**–R**]

Qualifier

–R Reinitializes the system catalog space and overwrites standard UniVerse-supplied programs. Although this option does not delete the system catalog space, use caution when using **–**R.

Description

The impact of INITIALIZE.CATALOG can be catastrophic. You should be absolutely sure you want to initialize the catalog space. If you have any doubts whatsoever about this, do not press **Y** at the `Continue Initialization` prompt.

Example

This example reinitializes the system catalog space:

```
>INITIALIZE.CATALOG

*****************************************************************
*                           WARNING
*
*      You are about to destroy the system Catalog space. This
*      may have a significant effect upon the user community.
*
******************************************************************

Continue Initialization of the Catalog space? (Y/N) <Return>

Initialization of CATALOG space completed.
```

Use INITIALIZE.DEMO to initialize three demonstration files in your account.

Syntax

INITIALIZE.DEMO

Description

UniVerse supplies the sample files CUSTOMERS, INVENTORY, and ORDERS. INITIALIZE.DEMO updates the VOC file, then verifies that files with these names do not exist. If a file with one of these names exists, INITIALIZE.DEMO checks to see if it is an old demonstration file. If it is, INITIALIZE.DEMO clears the file without prompting you and loads new records into the file. If the file is not an old demonstration file, INITIALIZE.DEMO asks if you want to overwrite it. This command also checks for the existence of an ACCOUNTS file. If it exists, INITIALIZE.DEMO asks if you want to delete it.

JOBS

Use JOBS to list currently running phantom processes that were started from your current UniVerse process.

Syntax

JOBS

Description

Phantom processes are processes that run in the background. You start them with the PHANTOM command.

There is a system-wide limit on the number of processes you can initiate. If you can start no more processes when you issue a PHANTOM command, a message tells you there are no free phantoms.

For more information about phantom processes, see the PHANTOM command.

Example

This example shows that process 625 is running:

```
>JOBS
[625] Running : LIST SALES
>
```

Use LIMIT to set the maximum size of memory storage for a user's active BASIC routines.

Syntax

LIMIT [**PROGRAMSIZE** *size*]

Qualifier

size Expressed as a number of 1024-byte units. Zero (0) specifies unlimited space.

Description

If you do not specify PROGRAMSIZE, LIMIT displays the current value.

When a routine that exceeds *size* is loaded into a user's memory space, UniVerse tries to unload the least recently used programs to bring the total usage below *size*.

LIST

Use LIST to display selected data from a file. You can sort and format the output of LIST in many ways.

Syntax

LIST [**DICT** | **USING** [**DICT**] *dictname*] *filename* [*records* | **FROM** *n*]
[*selection*] [*output.limiter*] [*sort*] [*output*] [*report.qualifiers*]

Qualifiers

DICT
Lists records in the file dictionary of *filename*. If you do not specify DICT, records in the data file are listed.

USING [DICT] *dictname*
If DICT is not specified, uses *dictname* as the dictionary of *filename*. If DICT is specified, the dictionary of *dictname* is used as the dictionary of *filename*.

filename
The file whose records you want to list. You can specify *filename* anywhere in the sentence. LIST uses the first word in the sentence that has a file descriptor in the VOC file as the filename.

records
Specifies the records to include in the list. You can specify as many record IDs as you want, separated by spaces. Enclose record IDs in single quotation marks to ensure that RetrieVe does not interpret them as field names or keywords.

FROM *n*
Specifies the records whose record IDs are stored in select list *n*.

selection
A selection expression specifying the conditions that data in a record must meet for the record to be selected. A selection expression begins with the keyword WITH. For syntax details, see the WITH keyword in Chapter 2.

output.limiter
An expression specifying the conditions that values in multivalued fields must meet for those values to be output. An output-limiting expression begins with the keyword WHEN. For syntax details, see the WHEN keyword in Chapter 2.

sort
A sort expression that specifies the type of sort and the field to sort on. The syntax is as follows:

BY *field* — Sort on *field* in ascending order.

BY.DSND *field*	Sort on *field* in descending order.
BY.EXP *field*	Explode multivalues in *field* and sort in ascending order.
BY.EXP *field*	Explode multivalues in *field* and sort in descending order.

For more information, see Chapter 2.

output

Specifies the fields whose data you want to list. The fields must be defined in the file dictionary. If you are listing dictionary records, the fields must be defined in the DICT.DICT file.

You can precede a field name with one field modifier. Field modifiers are:

AVG	ENUM	PCT
BREAK.ON	MAX	TOTAL
BREAK.SUP	MIN	TRANSPORT
CALC		

You can follow a field name with one or more field qualifiers. Field qualifiers are:

AS	COL.HDG	FMT
ASSOC	CONV	MULTI.VALUE
ASSOC.WITH	DISPLAY.LIKE	SINGLE.VALUE

For information about these keywords and their synonyms, see Chapter 2.

If you do not specify *output*, fields specified in the @ phrase are listed. If there is no @ phrase in the file dictionary, only record IDs are listed.

report.qualifiers

One or more of the following keywords:

COL.HDR.SUPP	FIRST	ID.ONLY	ONLY
COL.SPCS	FOOTER	ID.SUP	SAMPLE
COL.SUP	GRAND.TOTAL	LPTR	SAMPLED
COUNT.SUP	HDR.SUP	MARGIN	SUPP
DBL.SPC	HEADER	NO.SPLIT	VERT
DET.SUP		NOPAGE	

These keywords modify the report format. For information about them and their synonyms, see Chapter 2.

If you do not specify any report qualifiers, LIST produces a report with:

- UniVerse default heading and footing
- Single spacing between records
- Column headings on every page
- No control breaks
- Paged output to the screen or terminal

Description

LIST lists the selected records in the order in which they are stored in the file, unless you specify a sort expression.

Specifying Output. In an *output* specification you can specify as many field names as you want, separated by spaces. You can specify field names explicitly or as a phrase containing field names. You can use field names and phrases together in the same output specification. Data in the specified fields is listed in columns in the order in which field names appear in the sentence or @ phrase.

Using Field Expressions. You can use field expressions in selection expressions, sort expressions, output specifications, and report clauses. A field expression can be a field name with or without field qualifiers, or it can be an EVAL expression. An EVAL expression is an I-descriptor expression specified on the command line, introduced by the keyword EVAL.

Suppressing Record IDs. By default, LIST displays record IDs in the first column of output. Use the ID.SUP keyword to suppress the display of record IDs.

Use LIST.DF to list the pathnames and part numbers of part files belonging to a distributed file.

Syntax

LIST.DF *dist.filename*

Qualifier

dist.filename The name of a distributed file.

Example

This example lists two part files (PART1 and PART2) belonging to the distributed file DIST.FILE:

```
>LIST.DF DIST.FILE
Part file "/usr/SALES/PART1", Part number = 1.
Part file "/usr/SALES/PART2", Part number = 2.
>
```

LIST.DIFF

Use LIST.DIFF to compare two saved lists and create a third list of elements from list one that are not in list two.

Syntax

LIST.DIFF [*listname1*] [*options*]

Qualifiers

listname1 The name of a saved list in the &SAVEDLISTS& file. If you do not specify *listname1*, LIST.DIFF uses the list whose name is an empty string.

options can be one or more of the following:

LPTR	Sends output to the printer.
CRT	Sends output to the terminal.
NOPAGE	If output goes to the terminal, suppresses automatic paging.
OVERWRITING	Overwrites an existing list in the &SAVEDLISTS& file.
NO.WARN	If output goes to the terminal or printer, suppresses line numbers.
HEX	Lists output in hexadecimal format.

Description

The system prompts you to enter the name of a second list by displaying the following prompt:

```
WITH:
```

Enter the name of a second list.

If CRT or LPTR is not specified, the system prompts you for a destination for the result of the LIST.DIFF operation by displaying the following prompt:

```
TO:
```

Enter the name of the destination file using one of the following formats:

[*dest.listname* [*account.name*]]

(*dest.file***)** *record.ID*

If you use the first form, LIST.DIFF copies the original list to the destination list, *dest.listname*. If you do not specify *dest.listname*, LIST.DIFF uses an empty string as the list name. If you specify *account.name*, LIST.DIFF creates the new list in the &SAVEDLIST& file of the specified account. If you specify the OVERWRITING option, the new list overwrites any existing list with the same name.

If you use the second form, LIST.DIFF converts the list to a record in *dest.file*, and each element in the list constitutes a field in the record. If the size of the list exceeds 32,267 bytes, the record is truncated.

Example

This example creates and saves two select lists: 1991 and 1992. Comparing the two saved lists, LIST.DIFF creates and saves a third select list, DIFF.92, which contains elements from list 1991 that are not in list 1992.

```
>SELECT SUN.MEMBER WITH YR.JOIN EQ "1991"
2 record(s) selected to SELECT list #0.
>>SAVE.LIST 1991
2 record(s) SAVed to SELECT list "1991".

>SELECT SUN.MEMBER WITH YR.JOIN >= "1991"
7 record(s) selected to SELECT list #0.
>>SAVE.LIST 1992
7 record(s) SAVed to SELECT list "1992".

>LIST.DIFF 1992
WITH: 1991
TO: DIFF.92
5 record(s) SAVed to SELECT list "DIFF.92".
```

LIST.FILE.STATS

Use LIST.FILE.STATS to display or print file statistics. You must use the ACCOUNT.FILE.STATS command to gather the statistics before you can list them with LIST.FILE.STATS.

Syntax

LIST.FILE.STATS [**LOCAL**] [**WIDE**] [**LPTR**]

Qualifiers

LOCAL	Lists statistics in the STAT.FILE file in the local account. If you do not specify LOCAL, the statistics in UNIVERSE.STAT.FILE, in the UV account, are listed.
WIDE	Lists file statistics in 132-column format. If you do not specify WIDE, the report uses 80-column format.
LPTR	Sends output to the printer.

Description

If you enter LIST.FILE.STATS with no options, the command generates a listing of statistics stored in the UNIVERSE.STAT.FILE file.

Example

The LIST.FILE.STATS command produces a report such as the following:

```
        * * * F I L E    S T A T S    R E C O R D * * *         Page   1

/usr/walter gathered on 01 OCT 1995 at 14:09:21.


                              Record.  File......
File Name....  Type Mod. Sep Count.. Size (ext)   25%   50%   75%  >100%

D_&COMO&         18   1   1        1       1536     1     0     0
&COMO&            1               17      34330
D_&DEVICE&        3   1   2       20       3072     0     0     0      1
&DEVICE&          2   3   4       15       8192     2     0     1
D_&ED&            3   1   2        1       2048     1     0     0
&ED&              1                9        757
D_&FILESTATS&     2   3   4       44      12288     0     0     1      2
&FILESTATS        3  17   4        7      36864    17     0     0
```

```
D_&HOLD&          3   1   2        1       2048     1     0     0
&HOLD&            1                1        286
D_&PH&            3   1   2        1       2048     1     0     0
&PH&              1                2      61080
D_&SAVEDLISTS&    3   1   2        1       2048     1     0     0
&SAVEDLISTS&      1               33     123803
D_&TEMP&          3   1   2        1       2048     1     0     0
&TEMP&            1                8        199
Press any key to continue...
```

LIST.INDEX

Use LIST.INDEX to display information about a file's secondary indices.

Syntax

LIST.INDEX [**DICT**] [*filename*] [*indices* | **ALL**]
[**STATISTICS** | **STATS** | **DETAIL**] [**LPTR** [*n*]] [**NO.PAGE**]

Qualifiers

DICT	Specifies the file dictionary.
filename	The name of a UniVerse file. If you do not specify *filename*, LIST.INDEX prompts for it.
indices	A list of indexed fields separated by spaces. *indices* are the names of fields in *filename* used as secondary index keys.
ALL	Lists all the secondary indices in the file.
STATISTICS	Lists more information about the secondary index, including the total number of keys, records per key, and index size. LIST.INDEX scans each index to gather the data, so this process can take a while for large files.
STATS	The same as STATISTICS.
DETAIL	In addition to the information from the STATISTICS keyword, displays the name of each secondary key value, the number of records with that key value, and the bytes used for that key value.
LPTR	Sends output to the printer via logical print channel *n*. If you do not specify *n*, 0 is assumed.
NO.PAGE	Suppresses automatic paging.

Description

If you do not specify either *indices* or ALL, LIST.INDEX prompts you.

LIST.INDEX displays general information about specified secondary indices. General information appears at the top of the report for each index, including the filename, the number and type of indices present, the update mode of the index (enabled or disabled), and whether the index requires updating.

After the general information, LIST.INDEX provides the following information for each index:

Heading	Value	Description
Index name	*fieldname*	The name of the indexed field
Type	D I A S C	Data descriptor I-descriptor A-descriptor S-descriptor A- or S-descriptor with correlative in field 8
Build	Required Not Reqd	Index needs to be built Index does not need to be built
Nulls	Yes No	Empty strings are indexed Empty string are not indexed
In DICT	Yes No	File dictionary contains corresponding field File dictionary does not contain corresponding field
S/M	S M	Single-valued index Multivalued index
Just	L R	Left or text justification Right justification
Unique	Y N	Field has UNIQUE column constraint Field has no UNIQUE column constraint
Field num **I-type**	*field number* *I-type expression* *correlative*	If Type is D, A, or S If Type is I If Type is C

If you specify the name of a distributed file, LIST.INDEX lists general information about all part files. LIST.INDEX lists further information about an index only if the corresponding fields in all part files have similar indices. For indices to be similar, the following elements of the field definitions must be identical:

- Type
- Justification
- S/M (single-valued or multivalued)
- Field number
- Compiled I-type object code

LIST.INTER

Use LIST.INTER to compare two saved lists and create a third list of elements from list one that are also found in list two, which are not redundant.

Syntax

LIST.INTER [*listname1*] [*options*]

Qualifiers

listname1 The name of a saved list in the &SAVEDLISTS& file. If you do not specify *listname1*, LIST.INTER uses the list whose name is an empty string.

options can be one or more of the following:

LPTR	Sends output to the printer.
CRT	Sends output to the terminal.
NOPAGE	If output goes to the terminal, suppresses automatic paging.
OVERWRITING	Overwrites an existing list in the &SAVEDLISTS& file.
NO.WARN	If output goes to the terminal or printer, suppresses line numbers.
HEX	Lists output in hexadecimal format.

Description

The system prompts you to enter the name of a second list by displaying the following prompt:

```
WITH:
```

Enter the name of a second list.

If CRT or LPTR is not specified, the system prompts you for a destination for the result of the LIST.INTER operation, by displaying the following prompt:

```
TO:
```

Enter the name of the destination file using one of the following formats:

[*dest.listname* [*account.name*]]

(*dest.file***)** *record.ID*

If you use the first form, LIST.INTER copies the original list to the destination list, *dest.listname*. If you do not specify *dest.listname*, LIST.INTER creates a list whose name is an empty string. If you specify *account.name*, LIST.INTER creates the new list in the &SAVEDLIST& file of the specified account. If you use the OVERWRITING option, the new list overwrites any existing list with the same name.

If you use the second form, LIST.INTER converts the list to a record in *dest.file*, and each element in the list constitutes a field in the record. If the size of the list exceeds 32,267 bytes, LIST.INTER truncates the record.

Example

This example creates and saves two select lists: 1991 and 1992. Comparing the two saved lists, LIST.INTER creates and saves a third select list, INTER.92, which contains elements from list 1991 that are also in list 1992 and that are not redundant.

```
>SELECT SUN.MEMBER WITH YR.JOIN EQ "1991"
2 record(s) selected to SELECT list #0.
>>SAVE.LIST 1991
2 record(s) SAVed to SELECT list "1991".

>SELECT SUN.MEMBER WITH YR.JOIN >= "1991"
7 record(s) selected to SELECT list #0.
>>SAVE.LIST 1992
7 record(s) SAVed to SELECT list "1992".

>LIST.INTER 1991
WITH: 1992
TO: INTER.92
2 record(s) SAVed to SELECT list "INTER.92".
```

LIST.ITEM

Use LIST.ITEM to display a complete listing of selected records.

Syntax

LIST.ITEM [**DICT** | **USING** [**DICT**] *dictname*] *filename* [*records* | **FROM** *n*] [*selection*] [*sort*] [*report.qualifiers*]

Qualifiers

DICT
: Lists records in the file dictionary of *filename*. If you do not specify DICT, records in the data file are listed.

USING [DICT] *dictname*
: If DICT is not specified, uses *dictname* as the dictionary of *filename*. If DICT is specified, the dictionary of *dictname* is used as the dictionary of *filename*.

filename
: The file whose records you want to list. You can specify *filename* anywhere in the sentence. LIST.ITEM uses the first word in the sentence that has a file descriptor in the VOC file as the filename.

records
: Specifies the records to include in the list. You can specify as many record IDs as you want, separated by spaces. Enclose record IDs in single quotation marks to ensure that RetrieVe does not interpret them as field names or keywords.

FROM *n*
: Specifies the records whose record IDs are stored in select list *n*.

selection
: A selection expression specifying the conditions that data in a record must meet for the record to be selected. A selection expression begins with the keyword WITH. For syntax details, see the WITH keyword in Chapter 2.

sort
: A sort expression that specifies the type of sort and the field to sort on. The syntax is as follows:

BY *field*	Sort on *field* in ascending order.
BY.DSND *field*	Sort on *field* in descending order.
BY.EXP *field*	Explode multivalues in *field* and sort in ascending order.
BY.EXP.DSND *field*	Explode multivalues in *field* and sort in descending order.

For more information, see Chapter 2.

report.qualifiers

One or more of the following keywords:

COL.HDR.SUPP	HDR.SUP	LPTR	SAMPLE
DBL.SPC	HEADER	MARGIN	SAMPLED
FIRST	ID.SUP	NOPAGE	SUPP
FOOTER			

These keywords modify the report format. For information about them and their synonyms, see Chapter 2.

If you do not specify any report qualifiers, LIST.ITEM produces a report with:

- UniVerse default heading
- Single spacing between records
- Paged output to the screen or terminal

Description

RetrieVe field output specifications are ignored.

LIST.ITEM is like the Pick version of the COPY command (using the P or T option), but it lets you specify selection criteria and headings and footings.

LIST.LABEL

Use LIST.LABEL to specify a format suitable for mailing labels and other specialized block listings. The report lists the fields for each record in a block, with headings in the leftmost column.

Syntax

LIST.LABEL [**DICT** | **USING** [**DICT**] *dictname*] *filename*
[*records* | **FROM** *n*] [*selection*] [*output.limiter*] [*sort*] [*output*]
[*report.qualifiers*]

Qualifiers

DICT
Lists records in the file dictionary of *filename*. If you do not specify DICT, records in the data file are listed.

USING [DICT] *dictname*
If DICT is not specified, uses *dictname* as the dictionary of *filename*. If DICT is specified, the dictionary of *dictname* is used as the dictionary of *filename*.

filename
The file whose records you want to list. You can specify *filename* anywhere in the sentence. LIST.LABEL uses the first word in the sentence that has a file descriptor in the VOC file as the filename.

records
Specifies the records to include in the list. You can specify as many record IDs as you want, separated by spaces. Enclose record IDs in single quotation marks to ensure that RetrieVe does not interpret them as field names or keywords.

FROM *n*
Specifies the records whose record IDs are stored in select list *n*.

selection
A selection expression specifying the conditions that data in a record must meet for the record to be selected. A selection expression begins with the keyword WITH. For syntax details, see the WITH keyword in Chapter 2.

output.limiter
An expression specifying the conditions that values in multivalued fields must meet for those values to be output. An output-limiting expression begins with the keyword WHEN. For syntax details, see the WHEN keyword in Chapter 2.

sort A sort expression that specifies the type of sort and the field to sort on. The syntax is as follows:

BY *field*	Sort on *field* in ascending order.
BY.DSND *field*	Sort on *field* in descending order.
BY.EXP *field*	Explode multivalues in *field* and sort in ascending order.
BY.EXP.DSND *field*	Explode multivalues in *field* and sort in descending order.

For more information, see Chapter 2.

output Specifies the fields whose data you want to list. The fields must be defined in the file dictionary. If you are listing dictionary records, the fields must be defined in the DICT.DICT file.

If you do not specify *output*, fields specified in the @ phrase are listed. If there is no @ phrase in the file dictionary, only record IDs are listed.

report.qualifiers

One or more of the following keywords:

COL.HDR.SUPP	FOOTER	ID.SUP	SAMPLE
COUNT.SUP	HDR.SUP	LPTR	SAMPLED
DBL.SPC	HEADER	NOPAGE	SUPP
FIRST	ID.ONLY	ONLY	

These keywords modify the report format. For information about them and their synonyms, see Chapter 2.

If you do not specify any report qualifiers, LIST.LABEL produces a report with:

- UniVerse default heading and footing
- Paged output to the screen or terminal

Description

After you enter a LIST.LABEL command, the following prompt appears:

```
COUNT, ROWS, SKIP, INDENT, SIZE, SPACE [ ,C ] ?
```

Enter numeric values for each of these specifications (except C) to produce the formatted report. The following list describes what to enter:

Specification	Description
COUNT	The number of labels across the page or screen.
ROWS	The number of lines (fields) displayed or printed per label.
SKIP	The number of blank lines vertically between labels.
INDENT	The number of indented spaces from left margin to the first column of labels. Can be zero.
SIZE	The maximum number of characters in any display field.
SPACE	The number of blank spaces horizontally between labels.
C	Do not print empty fields. If you do not specify C, empty fields are printed as a series of blanks.

After you enter these specifications, a series of prompts requests headers for each row in a label. You can enter a header or press **Return** to specify no header.

```
Row 1 header?NAME
```

In the report these headers appear for each set of labels in the left margin. If INDENT is zero, the command does not prompt for row headers. Be sure to specify an indent area wide enough for the headers.

The total width specifications cannot exceed the capability of the output device, whether it is the terminal screen or the printer. Use the following formula to calculate the total width:

INDENT + COUNT(SIZE + SPACE)

To produce a continuous report without page breaks, use the COL.HDR.SUPP keyword. This keyword also suppresses the header at the top of the report.

Example

This example creates labels made up of the record ID, the first name, and the last name. The record IDs are listed by default. The second line is the format specification. COUNT specifies three labels across the page, with each label made up of three fields (ROWS). Two blank lines vertically separate each row of labels (SKIP), the first column of labels is indented 10 spaces from the left (INDENT), each

display field is 15 characters wide (SIZE), and 2 blank spaces horizontally separate each column of labels (SPACE).

Because INDENT specifies 10 spaces, LIST.LABEL prompts the user to enter a row header for each row:

```
>LIST.LABEL SUN.MEMBER FNAME LNAME
COUNT, ROWS, SKIP, INDENT, SIZE, SPACE [ ,C ] ? 3,3,2,10,15,2
Row 1 header ID
Row 2 header NAME
Row 3 header <Return>
```

This is the output:

```
LIST.LABEL SUN.MEMBER FNAME LNAME 11:10:31am  20 Oct 1995
PAGE    1

ID        2342            3452            4102
NAME      RALPH           JANE            LESLIE
          ADDAMS          SAMUEL          BROWN


ID        4108            5390            6100
NAME      HILLARY         ALICE           BOB
          HENDERSON       MIX             MASTERS


ID        7100            4309            4439
NAME      ALICE           EDGAR           DON
          WILLIAMS        WILLIAMS        ALISON


ID        5205            6203            6783
NAME      ALICE           SAM             DAVID
          CRATCHETT       YORK            HALE


ID        7505
NAME      HARRY
          EDWARDS



13 records listed.
```

LIST.LOCKS

Use LIST.LOCKS to display the status of the 64 task synchronization locks.

Syntax

LIST.LOCKS

Description

LIST.LOCKS displays the lock number and a number that indicates which user set the lock. If a lock is not set, LIST.LOCKS displays a series of dashes.

Examples

This example first shows the LIST.LOCKS report with no locks set. Next, the user sets lock 5 with the LOCK command. The second LIST.LOCKS report shows that user 34 set lock 5.

```
>LIST.LOCKS
 0:-----  1:-----  2:-----  3:-----  4:-----  5:-----  6:-----  7:-----
 8:-----  9:----- 10:----- 11:----- 12:----- 13:----- 14:----- 15:-----
16:----- 17:----- 18:----- 19:----- 20:----- 21:----- 22:----- 23:-----
24:----- 25:----- 26:----- 27:----- 28:----- 29:----- 30:----- 31:-----
32:----- 33:----- 34:----- 35:----- 36:----- 37:----- 38:----- 39:-----
40:----- 41:----- 42:----- 43:----- 44:----- 45:----- 46:----- 47:-----
48:----- 49:----- 50:----- 51:----- 52:----- 53:----- 54:----- 55:-----
56:----- 57:----- 58:----- 59:----- 60:----- 61:----- 62:----- 63:-----

>LOCK 5
>LIST.LOCKS
 0:-----  1:-----  2:-----  3:-----  4:-----  5:34     6:-----  7:-----
 8:-----  9:----- 10:----- 11:----- 12:----- 13:----- 14:----- 15:-----
16:----- 17:----- 18:----- 19:----- 20:----- 21:----- 22:----- 23:-----
24:----- 25:----- 26:----- 27:----- 28:----- 29:----- 30:----- 31:-----
32:----- 33:----- 34:----- 35:----- 36:----- 37:----- 38:----- 39:-----
40:----- 41:----- 42:----- 43:----- 44:----- 45:----- 46:----- 47:-----
48:----- 49:----- 50:----- 51:----- 52:----- 53:----- 54:----- 55:-----
56:----- 57:----- 58:----- 59:----- 60:----- 61:----- 62:----- 63:-----
```

Use LIST.READU to list active file and record locks. These locks are set by certain BASIC statements, UniVerse commands, and SQL statements.

Syntax

LIST.READU [**USER** *terminal#*] [**EVERY**]

Qualifiers

USER Lists the active locks owned by the user whose terminal number is *terminal#*.

EVERY Lists the active group locks in addition to the active file and record locks.

Description

The LIST.READU command produces a report containing the following information:

Device A number that identifies the logical partition of the disk where the file system is located.

Inode A number that identifies the file that is being accessed.

Netnode A number that identifies the host from which the lock originated. 0 indicates a lock on the local machine.

UNIX. The network node number is the last part of the TCP/IP host number specified in the */etc/hosts* file.

Windows NT. This is either the last part of the TCP/IP host number or the LAN Manager node name, depending on the network transport used by the connection.

Userno The terminal number identifying the user or phantom process that set the lock.

Pid A number that identifies the controlling process. The number is not returned for remote files accessed across UV/Net.

Login ID The login name of the user who set the lock. The name is not returned for remote files accessed across UV/Net.

Item-ID The record ID of the locked record.

When the report describes file locks, it contains the following additional information:

Lmode — The number (from 1 through the total number of file lock semaphores set by the parameter FSEMNUM) assigned to the lock, and a code that describes the file lock. The code is one of the following:

- FS Shared file lock.
- IX Shared file lock with intent to acquire an exclusive file lock.
- FX Exclusive file lock.
- XU Exclusive file lock set by CLEAR.FILE.
- CR Shared file lock set by RESIZE during concurrent resizing of file.
- XR Exclusive file lock set by RESIZE or UVFIXFILE during file restructuring.

When the report describes group locks, it contains the following additional information:

Lmode — The number (from 1 through the number of group lock semaphores set by the parameter GSEMNUM) assigned to the lock, and a code that describes a type of group lock. The code is one of the following:

- EX Exclusive lock used when SQL scans a file for the INSERT, UPDATE, or DELETE statement.
- SH Shared lock used when SQL scans a file for a SELECT statement.
- RD Read lock.
- WR Write lock.
- IN System information lock (identifies a record that is locked but has not been written to or read).

G-Address — Logical disk address of group, or its offset in bytes from the start of the file. This address for a type 1 or type 19 file is 1. The G-Address appears in hexadecimal notation in the report.

Record Locks The number of locked records in the group.

Group RD Number of readers in the group.

Group SH Number of shared group locks.

Group EX Number of exclusive group locks.

A list of file and group semaphores might also appear in the report. Semaphores are used for internal concurrency control and indicate that a process is actively changing the file or group lock table.

You can determine the number of semaphores on the system by looking at the *uvconfig* file. The FSEMNUM is the total number of file lock semaphores, and the GSEMNUM is the number of group lock semaphores.

When the report describes record locks, it contains the following additional information:

Lmode The number (from 1 through the number of group lock semaphores set by the parameter GSEMNUM) assigned to the lock, and a code that describes a type of record lock. The code is one of the following:

RL Shared record lock

RU Update record lock

Example

```
>LIST.READU EVERY
Active Group Locks:                                    Record Group Group Group
Device.... Inode....  Netnode Userno  Lmode G-Address.  Locks ...RD ...SH ...EX
   1638492    342346        0    122   8 IN     389000      1     0     0     0

   1638534   1060608        0    108  11 IN          1      1     0     0     0


Active Record Locks:
Device.... Inode....  Netnode Userno  Lmode   Pid Login Id Item-ID............
   1638492    342346        0    122   8 RU 15006 janet    15312
   1638534   1060608        0    108  11 RU 13099 davel    DKL1
```

LIST.SICA

Use LIST.SICA to list the contents of the security and integrity constraints area (SICA) of an SQL table.

Syntax

LIST.SICA *tablename* [**LPTR**] [**NO.PAGE**]

Qualifiers

tablename	The name of an SQL table.
LPTR	Sends output to the printer.
NO.PAGE	Suppresses automatic paging.

Description

LIST.SICA lists the currently active column, constraint, and permission definitions for the specified table.

You cannot use LIST.SICA to reference a remote file over UV/Net.

Example

This example lists the SICA for INV_LIST, which is defined as an SQL table in the schema DEMO. The example shows one column definition, a constraint definition, and a permissions definition.

```
>LIST.SICA INV_LIST

LIST.SICA INV_LIST 12:44:27pm  12 May 1995   Page    1
=========================================
Sica Region for file "INV_LIST"

  Schema:          DEMO
  Checksum is:     9660
    Should Be:     9660
  Size:            460
  Creator:         214

  Total Col Count: 5
  Column Count:    5
  Key Count:       1
  Check Count:     1
  Permission Count:1
```

```
History Count:   0

Data for Column "PRODNO"

  Position:      0
  Key Position:  1
  Multivalued:   No
  Not Null:      Yes
  Not Empty:     No
  Unique:        No
  Row Unique:    No
  Primary Key:   Yes
  Default Type:  None
  Data Type:     INTEGER
  Conversion:    MD0
  Format:        10R
  No Default Value Defined
  No association defined
     .
     .
     .
Unnamed Constraint at position 1

  Text:           REORDER > 0
  Code length:   126

Permissions for User PUBLIC

  select_ok      Yes
  insert_ok      No
  delete_ok      No
  update_ok      No
  alter_ok       No
  reference_ok   No
  select_grant   No
  insert_grant   No
  delete_grant   No
  update_grant   No
  alter_grant    No
  ref_grant_ok   No
```

LIST.UNION

Use LIST.UNION to compare two saved lists and create a third list made up of elements from list one followed by all elements from list two that did not appear in the first list, and which are not redundant.

Syntax

LIST.UNION [*listname1*] [*options*]

Qualifiers

listname1 is the name of a saved list in the &SAVEDLISTS& file. If you do not specify *listname1*, LIST.UNION uses the list whose name is an empty string.

options can be one or more of the following:

LPTR	Sends output to the printer.
CRT	Sends output to the terminal.
NOPAGE	If output goes to the terminal, suppresses automatic paging.
OVERWRITING	Overwrites an existing list in the &SAVEDLISTS& file.
NO.WARN	If output goes to the terminal or printer, suppresses line numbers.
HEX	Lists output in hexadecimal format.

Description

The system prompts you to enter the name of a second list by displaying the following prompt:

```
WITH:
```

Enter the name of a second list.

If CRT or LPTR is not specified, the system prompts you for a destination for the result of the LIST.UNION operation, by displaying the following prompt:

```
TO:
```

Enter the name of the destination file using one of the following formats:

[*dest.listname* [*account.name*]]

(*dest.file***)** *record.ID*

If you use the first form, LIST.UNION copies the original list to *dest.listname*. If you do not specify *dest.listname*, LIST.UNION uses an empty string as the list name. If you specify *account.name*, LIST.UNION creates the new list in the &SAVEDLIST& file of the specified account. If you specify OVERWRITING, the new list overwrites any existing list with the same name.

If you use the second form, LIST.UNION converts the list to a record in *dest.file*, and each element in the list constitutes a field in the record. If the size of the list exceeds 32,267 bytes, LIST.UNION truncates the record.

Example

This example creates and saves two select lists: 1991 and 1992. Comparing the two saved lists, LIST.UNION creates and saves a third select list, UNION.92, which contains all elements from list 1991 followed by those elements in list 1992 that are not in list 1991 and that are not redundant.

```
>SELECT SUN.MEMBER WITH YR.JOIN EQ "1991"
2 record(s) selected to SELECT list #0.
>>SAVE.LIST 1991
2 record(s) SAVed to SELECT list "1991".

>SELECT SUN.MEMBER WITH YR.JOIN >= "1991"
7 record(s) selected to SELECT list #0.
>>SAVE.LIST 1992
7 record(s) SAVed to SELECT list "1992".

>LIST.UNION 1991
WITH: 1992
TO: UNION.92
7 record(s) SAVed to SELECT list "UNION.92".
```

LISTME

Use LISTME to list your currently running processes.

Syntax

LISTME

Description

The contents of the LISTME report depends on the operating system you are running.

UNIX. LISTME lists the following:

USER or UID	Your UNIX login name
PID	Process ID number
PPID	Process ID number of the parent process
C	Scheduler status
STIME	The time the process was started
TTY	Terminal number
TIME	Accumulated CPU time
CMD	The command that the process is running

LISTME and *ps* produce this report in different formats depending on the UNIX system on which you are working.

Windows NT. LISTME lists the following:

UID	Your user identifier. If you log in as a member of the Administrators' group, this value is 0. If you log in as the "Guest" user, this value is –2. Any other users are assigned a unique UID number.
User No	UniVerse user number.
User Name	Domain and user name.
Terminal No	User type (e.g., console, telnet, and so on) and UniVerse user number.
Login Time	Date and time the process was started.

Examples

UNIX. The LISTME command executes the UNIX *df* command, which produces a report similar to this:

```
>LISTME
 USER   PID   PPID  C     STIME   TTY   TIME CMD
  sue 20343  15881 12  11:52:12 ttyq9   0:02 STATUS ME
  sue 20344  20343 47  11:52:14 ttyq9   0:01 ps -f
  sue 15881  15877  0  09:26:42 ttyq9   0:31 uv
  sue 15877  15876  0  09:26:33 ttyq9   0:03 -csh
>
```

Windows NT. The LISTME command produces a report similar to this:

```
>LISTME
These are the UniVerse processes running under your user id:

UID User Name User   Terminal No          Login Time
   0  136 MK33 mith  console:136   15/01/96 09:33:10
   0  143 MK33 mith   telnet:143   15/01/96 11:14:49
>
```

LISTU

Use LISTU to list all the users currently logged in.

Syntax

LISTU

Description

The contents of the LISTU report depends on the operating system you are running.

Examples

UNIX. The LISTU command executes the UNIX *who* command, which produces a report similar to this:

```
>LISTU
These are the users presently sharing the system.

larry      ttyp0        Feb 17 16:54
rd         ttyp1        Feb 18 07:53
ellen      ttyp2        Feb 18 09:55
glen       ttyp3        Feb 18 08:03
tom        ttyp4        Feb 18 11:29
ted        ttyp5        Feb 18 08:11
qa         ttyp6        Feb 18 08:32
qa         ttyp7        Feb 17 17:19
wendy      ttyp8        Feb 18 08:37
steve      ttyp9        Feb 18 08:41
donna      ttypa        Feb 18 08:42
sean       ttypb        Feb 18 08:47
walter     ttypc        Feb 18 12:28
katy       ttypd        Feb 18 08:50
adrian     ttype        Feb 18 08:52
qa         ttypf        Feb 18 09:04
tina       ttyq0        Feb 18 08:56
bill       ttyq1        Feb 18 08:56
    .
    .
    .
There are currently 55 users logged on the system.
>
```

Windows NT. The LISTU command produces a report similar to this:

```
>LISTU
These are the UniVerse users presently sharing the system:

 UID User Name       User   Terminal No        Login Time
 0        136  MK33\Smith   console:136 15/01/96 09:33:10
 0        143  MK33\Smith    telnet:143 15/01/96 11:14:49
 1720     185  MC04\Whyte    telnet:185 15/01/96 11:23:43
 -2       192  MK33\Scott   console:192 15/01/96 15:44:38
 1984     206 VMARK\Adams   console:206 15/01/96 14:12:08

There are currently 5 users logged on the system.
>
```

LIST commands

Use the LIST commands to view the contents of the VOC file. The LIST commands all begin with LIST followed by one or more letters indicating the VOC entries you want to list. For example, LISTF lists files and LISTK lists keywords.

Syntax

LISTDOS

LISTF

LISTFL

LISTFR

LISTK

LISTM

LISTO

LISTPA

LISTPH

LISTPQ

LISTR

LISTS

LISTSL

LISTUN

LISTV

Description

The LIST commands are sentences or procs stored in the UNIVERSE.VOCLIB file. The following table describes each command:

Command	Description
LISTDOS	Lists all DOS commands in the VOC file.
LISTF	Lists all files defined in the VOC file.
LISTFL	Lists files stored in this account.

Command	Description
LISTFR	Lists files stored in remote accounts.
LISTK	Lists keywords stored in the VOC file.
LISTM	Lists the menu selector records in the VOC file.
LISTO	Lists “other”-type keywords in the VOC file.
LISTPA	Lists the paragraphs stored in the VOC file.
LISTPH	Lists the phrases stored in the VOC file.
LISTPQ	Lists the proc commands in the VOC file.
LISTR	Lists all remote commands in the VOC file.
LISTS	Lists all stored sentences in the VOC file.
LISTSL	Lists all verbs stored in the VOC file that use a select list.
LISTUN	Lists the UNIX commands in the VOC file.
LISTV	Lists all verbs stored in the VOC file.

LOCK

Use LOCK to set any of the 64 task synchronization locks to the locked state.

Syntax

LOCK *n* [**PROMPT** | **NO.WAIT**]

Qualifiers

n	Any number from 0 through 63.
PROMPT	If the lock is not available, returns control to the command processor so that you can execute other commands. When the lock is available, LOCK locks it and sends a message indicating that the lock is set. If NOTIFY ON is set, the message appears immediately, otherwise it appears when the next UniVerse prompt (>) appears (see NOTIFY for more information).
NO.WAIT	If the lock is not available, returns control to the command processor and issues a message. You must use the LOCK command again later to set the lock.

Description

If you use LOCK without the PROMPT or NO.WAIT keywords, and if the lock you specify is not available, the command waits until the lock is free before returning control to the command processor.

If the lock you specify is already locked by someone else, LOCK acts differently depending on which qualifier you specify.

LOCK performs the same function as the BASIC LOCK statement.

Use the CLEAR.LOCKS command to clear task synchronization locks. Use the LIST.LOCKS command to display the lock table.

Examples

This example first shows the LIST.LOCKS report with no locks set. Next, the user sets lock 5 with the LOCK command. The second LIST.LOCKS report shows that UniVerse user 34 set lock 5.

```
>LIST.LOCKS
 0:-----  1:-----  2:-----  3:-----  4:-----  5:-----  6:-----  7:-----
 8:-----  9:----- 10:----- 11:----- 12:----- 13:----- 14:----- 15:-----
16:----- 17:----- 18:----- 19:----- 20:----- 21:----- 22:----- 23:-----
24:----- 25:----- 26:----- 27:----- 28:----- 29:----- 30:----- 31:-----
32:----- 33:----- 34:----- 35:----- 36:----- 37:----- 38:----- 39:-----
40:----- 41:----- 42:----- 43:----- 44:----- 45:----- 46:----- 47:-----
48:----- 49:----- 50:----- 51:----- 52:----- 53:----- 54:----- 55:-----
56:----- 57:----- 58:----- 59:----- 60:----- 61:----- 62:----- 63:-----

>LOCK 5
>LIST.LOCKS
 0:-----  1:-----  2:-----  3:-----  4:-----  5:34     6:-----  7:-----
 8:-----  9:----- 10:----- 11:----- 12:----- 13:----- 14:----- 15:-----
16:----- 17:----- 18:----- 19:----- 20:----- 21:----- 22:----- 23:-----
24:----- 25:----- 26:----- 27:----- 28:----- 29:----- 30:----- 31:-----
32:----- 33:----- 34:----- 35:----- 36:----- 37:----- 38:----- 39:-----
40:----- 41:----- 42:----- 43:----- 44:----- 45:----- 46:----- 47:-----
48:----- 49:----- 50:----- 51:----- 52:----- 53:----- 54:----- 55:-----
56:----- 57:----- 58:----- 59:----- 60:----- 61:----- 62:----- 63:-----
```

LOG.RESTORE

Use LOG.RESTORE to restore transaction logging log files from tape to disk. You must be a UniVerse Administrator logged in to the UV account to use this command.

Syntax

LOG.RESTORE *first.log last.log* [*logdir.path*] [*device*]

Qualifiers

first.log	The number of the first log file to restore.
last.log	The number of the last log file to restore.
logdir.path	The full pathname of the directory into which log files are to be restored. If you do not specify a directory pathname, the current log directory is used.
device	The device name of the tape drive. If you do not specify *device*, the device defined as MT0 in the &DEVICE& file is used.

Description

Use LOG.RESTORE to restore log files that you have backed up to tape and removed from the log directory. LOG.RESTORE does not change anything in the UV_LOGS file.

Example

This example restores four log files—*lg344*, *lg345*, *lg346*, *lg347*—to the directory */u2/logrestore* from the default tape drive:

```
>LOG.RESTORE 344 347 /u2/logrestore
```

Use LOG.SAVE to save transaction logging log files from disk to tape. You must be a UniVerse Administrator logged in to the UV account to use LOG.SAVE.

Syntax

LOG.SAVE *first.log last.log* [*logdir.path*] [*device*]

Qualifiers

first.log	The number of the first log file to save.
last.log	The number of the last log file to save.
logdir.path	The full pathname of the directory where the log files reside. If you do not specify a directory pathname, the current log directory is used.
device	The device name of the tape drive. If you do not specify *device*, the device defined as MT0 in the &DEVICE& file is used.

Description

Use LOG.SAVE to save transaction logging files from disk to tape. LOG.SAVE does not change anything in the UV_LOGS file.

Example

This example saves four log files—*lg344*, *lg345*, *lg346*, *lg347*—from the directory */u2/logrestore* to the default tape drive:

```
>LOG.SAVE 344 347 /u2/logsave
```

LOGIN

Use LOGIN to initialize your UniVerse account environment.

Syntax

LOGIN

Description

When your UniVerse account is first created, the VOC file does not contain a LOGIN entry. You can create or change a LOGIN entry in the VOC file at any time. UniVerse searches for this entry and executes it when you invoke UniVerse and when you log to a UniVerse account.

A LOGIN entry must be a sentence, a paragraph, a menu, a proc, a BASIC program, or a verb. Usually the LOGIN entry calls a menu, sets printer parameters (with the SETPTR command), calls a security or system accounting program, or calls a program.

When you log to a UniVerse account by executing a LOGTO or CHDIR command or when you start a phantom process, the UniVerse command processor executes the LOGIN entry.

To prevent a phantom from executing the LOGIN entry, add a test to the LOGIN entry for `@TTY = "phantom"`. For example, if a phantom executes a LOGIN paragraph containing the following IF statement, the IF statement exits the LOGIN paragraph:

```
IF @TTY = 'phantom' THEN GO END.OF.LOGIN
```

Put commands that phantoms should not execute in the last section of the LOGIN paragraph. The last line of the LOGIN paragraph must be the following label:

```
END.OF.LOGIN:
```

For more information about phantom processes, see the PHANTOM command.

If you want a UniVerse process with a single command parameter, such as `uv "UPDATE.MASTER"`, to avoid executing the LOGIN entry, use the @TTY test just described, and have the process direct standard input, standard output, and standard error to nonterminal devices. For example:

```
uv "UPDATE.MASTER" </dev/null >/dev/null 2>&1
```

The preceding example is executed from a Bourne shell.

Example

This paragraph automatically starts up the ACCOUNTING program when you log in to UniVerse:

```
        LOGIN
0001: PA
0002: RUN BP ACCOUNTING
```

LOGON

Use LOGON to begin a UniVerse session on another terminal or to run a UniVerse command on another terminal.

This command is not supported on Windows NT systems.

Syntax

LOGON *port* [*command*]

Qualifiers

port The name of the terminal on which to start up UniVerse. Prefix *port* with the string TTY (that is, TTY*port*) to make up the name of the port definition record, which must exist in the &DEVICE& file.

command The command text. The command can be a stored sentence or paragraph or a UniVerse command. It cannot exceed 25 characters.

Description

If you enter **LOGON *port***, a UniVerse session starts on the named terminal.

If you enter **LOGON *port command***, a UniVerse job starts that runs only the specified command. Standard input, standard output, and standard error are redirected to the device name in &DEVICE&, and a phantom process starts.

You can control jobs started with LOGON using the usual methods of controlling phantom processes (see your UNIX documentation). For information about phantom processes, see the PHANTOM command.

Use LOGOUT or LO to log out of the UniVerse environment or to kill a phantom process.

Syntax

LO [*–pid#*]

LOGOUT [*–pid#*]

Qualifier

–pid# The process number of a phantom process to log out.

Description

UNIX System V. LOGOUT returns you to the system login prompt. When you use LOGOUT as a verb, LOGOUT is a synonym for the OFF command.

UNIX Berkeley. LOGOUT works like QUIT.

Windows NT. The way this command works depends on how you accessed UniVerse. If you accessed UniVerse from a Windows NT command window, LOGOUT terminates the UniVerse session and returns control to the command window. If you accessed UniVerse from a telnet interface, LOGOUT terminates UniVerse and the telnet session.

When you log out, UniVerse closes all files that you have been using, releases any devices assigned to your terminal, and discards the sentence stack if the VOC file STACKWRITE entry is OFF.

The login name for the *–pid#* qualifier must be the same as your login name. For more information about phantom processes, see the PHANTOM command.

LOGTO

Use LOGTO to log out of one UniVerse account and log in to another UniVerse account without leaving UniVerse. The current process continues in the new account.

Syntax

LOGTO *account*

Qualifier

account The name of the account you want to log in to. You can specify the name of the account as it is defined in the UV.ACCOUNT file, as a login name, or as a pathname.

Description

If UniVerse does not recognize the account name as an existing UniVerse account, it displays the following message:

```
"account" is not a valid account name.
```

If the directory is not set up for UniVerse, it displays the following message:

```
Account "directory" is not set up for UniVerse.
```

LOGTO retains the current sentence stack.

If the account you are logging to has a LOGIN entry in its VOC file, UniVerse executes it before displaying the > prompt.

Use LOGTO.ABORT to log out of one UniVerse account and log in to another UniVerse account. LOGTO.ABORT aborts the process from which it is called.

Syntax

LOGTO.ABORT *account*

Qualifier

account The name of the account you want to log in to. You can specify the name of the account as it is defined in the UV.ACCOUNT file, as a login name, or as a pathname.

Description

If UniVerse does not recognize the account name as an existing UniVerse account, it displays the following message:

```
"account" is not a valid account name.
```

If the directory is not set up for UniVerse, it displays the following message:

```
Account "directory" is not set up for UniVerse.
```

LOGTO.ABORT retains the current sentence stack.

If the account you are logging to has a LOGIN entry in its VOC file, UniVerse executes it before displaying the > prompt.

LOOP

Use LOOP in a paragraph to define a range of sentences to be executed repeatedly. LOOP begins the range, and REPEAT ends the range.

Syntax

LOOP
    statements
REPEAT

Qualifier

statements UniVerse statements you want to execute repeatedly.

Description

You can use any number of LOOP...REPEAT loops. At least one of the statements must be an IF statement that specifies the exit condition and action.

You can use LOOP...REPEAT loops only in paragraphs. They have no function on the command line.

Example

This example represents a paragraph as it appears in a VOC file:

```
001 PA
002 LOOP
003 IF <<A, ENTER VENDOR>> = '' THEN GO END
004 LIST PAYABLES <<A, ENTER VENDOR>> AMT.PAID PYMT.DATE
005 REPEAT
006 END: DISPLAY Done
```

The paragraph runs the LIST statement (line 4) repeatedly until the user enters nothing at the `ENTER VENDOR` prompt (by pressing **Return**). The IF statement (line 3) then transfers control to line 6, which displays the message `Done` and returns the user to the system prompt (>).

Use MAIL to communicate with other users on the system.

This command is not supported on Windows NT systems.

Syntax

MAIL [**–s** *subject*] [*user.list*]

Qualifiers

subject The subject of your message. MAIL uses only the first word after the *–s* flag as the subject. Enclose subjects containing spaces in quotation marks.

user.list A list of the user names of the people you want to send the message to. Enter user names exactly as users do when they log in.

Description

You can send mail to other people on the system, and you can also receive mail that other people send you.

To send mail, enter MAIL and the user name of the person to whom you want to send mail, then type the text of your message. To transmit the message, press **Ctrl-D** at the beginning of a new line. If you change your mind before you send the message, press your **Intr** (interrupt) key twice to cancel the message.

To see if you have any mail messages, enter **MAIL** with no arguments. The system tells you if you have unread mail. If you do not have mail, you return to the UniVerse prompt. If you have mail, MAIL prints a list of message headers telling who sent each message and when, followed by the UNIX mail prompt (&). For a list of mail commands, enter **?** at this prompt.

Capitalization is significant for mail commands. Most mail commands must be typed as lowercase letters. Some of the basic mail commands are as follows:

Command	Description
[**t**] [*message list*]	Displays the specified messages.
n	Goes to next message and displays it.
e [*message list*]	Edits messages.

Command	Description
f [*message list*]	Lists heading lines of specified messages.
d [*message list*]	Deletes specified messages.
s [*message list*] *file*	Appends the specified messages to *file*.
u [*message list*]	Undeletes specified messages.
r [*message list*]	Replies to specified messages.
pre [*message list*]	Makes specified messages go back to */usr/mail*.
m [*user list*]	Sends mail to specific users.
q	Quits, saving unresolved messages in *mbox*.
x	Quits, does not remove system mailbox.
h	Lists active message headers.
?	Lists a brief summary of commands.
!	Shell escape.
c [*directory*]	Changes directory.

message list is a list of message numbers or user names separated by spaces. If no message list is specified, the command applies to the current message.

For more information on additional mail commands and how mail works, see your UNIX documentation.

Examples

In the following example, the user invokes MAIL to send a message to Ken, whose login name is *ken*. The message is two lines long. The **Ctrl-D** at the beginning of the third line ends the message and sends it to Ken.

```
>MAIL ken<Return>
HELLO<Return>
HOW ARE YOU TODAY<Return>
<Ctrl-D>
EOT
```

When Ken invokes MAIL, the new message is listed. When he enters **n** (next), MAIL displays the message headers followed by the text of the message. When he

enters **q** (quit), the message is saved in the file *mbox*, and Ken returns to the UniVerse prompt.

```
>MAIL
12:13:14 01 JUL 1995
Mail version 2.18 5/19/95.  Type ? for help.
"/usr/spool/mail/ken": 1 message 1 new
>N  1 ken Sat Jul  1 12:13  13/241
&n
Message 1:
From bob Sat Jul  1 12:13:14 1995
Received: by vmark.UUCP (4.12/4.7)
       id AA01966; Wed, 1 Jul 95 12:13:12 edt
Date: Sat, 1 Jul 95 12:13:12 edt
From: bob (documentation account - Bob Bush)
To: ken
Status: R

HELLO
HOW ARE YOU TODAY

>q
Saved 1 message in mbox
>
```

MAKE.DEMO.FILES

Use MAKE.DEMO.FILES to initialize 10 sample files for the Circus database in the account you are logged in to.

Syntax

MAKE.DEMO.FILES

Description

UniVerse supplies the sample files ACTS, CONCESSIONS, ENGAGEMENTS, EQUIPMENT, INVENTORY, LIVESTOCK, LOCATIONS, PERSONNEL, RIDES, and VENDORS. MAKE.DEMO.FILES creates the data files and the file dictionaries for the 10 files, compiles the dictionaries, and loads the data (from the *sample* directory in uvhome) into them. The 10 filenames all have the .F suffix. The data in the .F files is the same as the data in the .T tables created by MAKE.DEMO.TABLES.

MAKE.DEMO.FILES verifies that files with these names do not exist. If a file with one of these names exists, MAKE.DEMO.FILES displays a message that the file already exists and MAKE.DEMO.FILES exits without taking any action.

Files are created with truncated names if they exceed the system limit.

Use MAKE.DEMO.TABLES to create and load the 10 sample tables for the Circus database in the account you are logged in to. The account must be a UniVerse SQL schema, and you must be a UniVerse SQL user defined in the SQL catalog.

Syntax

MAKE.DEMO.TABLES

Description

UniVerse supplies the sample tables ACTS, CONCESSIONS, ENGAGEMENTS, EQUIPMENT, INVENTORY, LIVESTOCK, LOCATIONS, PERSONNEL, RIDES, and VENDORS. MAKE.DEMO.TABLES creates the 10 tables and loads the data into them (from the *sample* directory in uvhome). The 10 table names all have the .T suffix. You are the owner of these tables.

MAKE.DEMO.TABLES verifies that your account is a UniVerse SQL schema. If it is not, MAKE.DEMO.TABLES tells you that a DBA needs to make the account into a schema by using the command SETUP.DEMO.SCHEMA. MAKE.DEMO.TABLES then verifies that you are a UniVerse SQL user and that tables with these names do not exist.

MAKE.MAP.FILE

Use MAKE.MAP.FILE to create a UniVerse file called &MAP&, which contains a map of the system catalog space.

Syntax

MAKE.MAP.FILE

Description

The information in the &MAP& file is the same as that displayed by the MAP command. By creating the &MAP& file, you can take full advantage of the selection, sorting, and report formatting capabilities of the RetrieVe commands to produce reports on the catalog space.

The following information is stored in the &MAP& file:

Field	Description
NAME	Name of the program or subroutine
DATE	The date it was last accessed
WHO	The account name from which it was cataloged
VAR	The number of variables
REF	The number of times the program has been run since being cataloged
OBJ	The number of bytes of object code
SEG	The number of common segments
CR	The size of the cross-reference table in bytes
SIZE	The total number of bytes for object code, cross-reference table, and symbol table
M/S	The type of program cataloged; M for a main program, S for a subroutine
REV	The BASIC compiler release level number
CONSTANTS	The number of constants in the program
ARGS	The number of arguments if the program is a subroutine
COMMON.VARS	The number of variables in unnamed common
SHM	The program is or is not loaded from shared memory

The @ phrase for the &MAP& file contains the fields NAME, DATE, WHO, VAR, REF, OBJ, SEG, CR, and SIZE. All the fields are contained in the @LPTR phrase.

The &MAP& file is usually defined only in the UV account, with pointers to it from other accounts. You can, however, create your own copy of this file. The dictionary must be the same as the dictionary of the UV account &MAP& file.

The contents of the &MAP& file become outdated as soon as anyone uses a command that changes the catalog, such as CATALOG or DELETE.CATALOG. We suggest that you use MAKE.MAP.FILE immediately before you produce a report about the catalog. This practice ensures that your information accurately reflects the current catalog.

MAP

Use MAP to display the contents of the system catalog space. MAP displays each program and subroutine in the catalog alphabetically.

Syntax

MAP

Description

MAP displays the following information for each item:

Column Heading	Description
Catalog Name	The name of the cataloged program or subroutine
Date	The date the program was last accessed
Who	The account name from which the program was cataloged
Ref	The number of times the program has been run since being cataloged
Var	The number of variables
Seg	The number of common segments
Obj	The number of bytes of executable object code
CR	The size of the cross-reference table in bytes
Size	The total number of bytes, consisting of the executable object code, the cross-reference table, and the symbol table

See MAKE.MAP.FILE for an alternative to examining the system catalog space.

Use MASTER to release some or all of the 64 task synchronization locks set with the LOCK command, to enable the **Break** key for a specified user, or to log users out of UniVerse. You must be a UniVerse Administrator logged in to the UV account to use MASTER.

Syntax

MASTER { **LOCKS** | **BREAK** | **OFF** } *user.no* | **ALL**

Qualifiers

LOCKS	Releases task synchronization locks.
BREAK	Enables the **Break** key.
OFF	Logs out users.
user.no	The user number of the user whose locks are released, whose **Break** key is enabled, or who is logged out. Use the PORT.STATUS command to get a list of the user numbers.
ALL	Specifies that the MASTER command affects all users.

Description

The MASTER command:

- Does not kill itself or its parent processes
- Releases locks regardless of who set them
- Does not release record locks or file locks

MENU.DOC

Use MENU.DOC to produce a menu listing.

Syntax

MENU.DOC

Description

MENU.DOC prompts you to enter the name of a file that stores menu records, and the name of a menu record.

For each option of the specified menu, MENU.DOC lists the menu's contents. The listing contains the following:

- Number and text of the menu option.
- Explanation field containing additional information about the option.
- Expanded VOC file entry that the menu executes when a user selects the option. If the Action field of a menu is the name of a sentence or paragraph, MENU.DOC displays the sentence or paragraph. If the Action field is the name of a menu pointer, MENU.DOC displays the name of the menu file and the menu record.

MENU.DOC is the same as option 15 on the UniVerse Menu Maintenance menu, which the MENUS command invokes.

See MENU.PIX for information about how to print a menu on the printer.

Use MENU.PIX to print an image of a menu on the printer.

Syntax

MENU.PIX

Description

MENU.PIX prompts you as follows:

```
Name of the Menu file =
```

Enter the name of a file that stores menu records. MENU.PIX then prompts you with the following:

```
Name of the Menu =
```

Enter the name of the menu record you want to print. MENU.PIX prints the menu and prompts you to enter the name of another menu record. If you do not want to print another menu record, press **Return**. MENU.PIX prompts you to enter the name of another menu file. If you do not want to print any more menu records, press **Return**. You return to the UniVerse prompt.

Using MENU.DOC and MENU.PIX you can quickly and easily document menus you create for your system. MENU.DOC lists menu option details, and MENU.PIX prints a copy of the menu record.

MENUS

Use MENUS to create, update, and maintain UniVerse menus.

Syntax

MENUS

Description

The MENUS command invokes the menu MAKE.MENUS in the UNIVERSE.MENU.FILE. The menu displays the following options:

```
 1. Enter/Modify       a menu
 2. Enter/Modify       a formatted menu
 3. Display            a summary of all menus on a menu file
 4. Display            the contents of a menu
 5. Enter/Modify       a VOC menu selector item
 6. Enter/Modify       a VOC stored sentence item
 7. Display            all menu selector items on the VOC file
 8. Display            all stored sentence items on the VOC file
 9. Display            the dictionary of a file
10. Print              a summary of all menus on a menu file
11. Print              the contents of a menu
12. Print              a virtual image of a menu on the printer
13. Print              the contents of a formatted menu
14. Print              the dictionary of a file
15. Print              detail of a menu, including VOC records referenced
```

Option 15 is also available as the UniVerse command MENU.DOC.

Use MERGE.LIST to merge two numbered select lists using relational set operations and put the result in a third select list.

Syntax

MERGE.LIST *list1* {**UNION** | **INTERSECT**[**ION**] | **DIFF**[**ERENCE**]} *list2* [**TO** *list3*] [**COUNT.SUP**]

Qualifiers

list1 *list2*	The numbers, 0 through 10, of the select lists you want to merge.
UNION	*list3* contains all elements from *list1* and all elements from *list2* that are not in *list1*.
INTERSECT[ION]	*list3* contains all elements from *list1* that are also in *list2*.
DIFF[ERENCE]	*list3* contains all elements from *list1* that are not in *list2*.
list3	The select list number for the output select list. If you do not specify *list3*, select list 0 is used.
COUNT.SUP	Suppresses the display of the number of records selected.

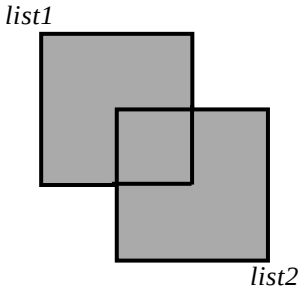
Description

Use MERGE.LIST to create a select list from existing select lists. This avoids the need to execute another SELECT command.

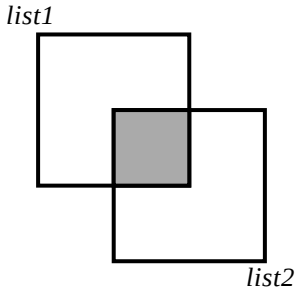
You must specify the numbers of the two select lists to be merged. If you specify a select list that is not active or is empty, MERGE.LIST issues a warning message and terminates.

If MERGE.LIST is successful, the two numbered select lists are emptied, and @SYSTEM.RETURN.CODE returns the number of elements in the resulting select list. If MERGE.LIST is not successful, the select lists are emptied and @SYSTEM.RETURN.CODE is set to –1. If a syntax error occurs, the lists are not changed.

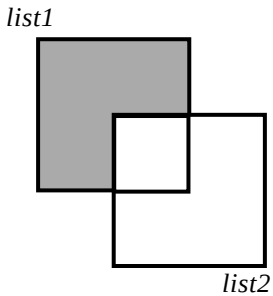
The relational set operations are illustrated in Figure 1-1. The shaded areas indicate what is included in the merged list.



UNION produces a select list whose elements are contained in *list1*, *list2*, or both. *list3* contains no duplicates, and the order of select list elements is not defined.



INTERSECTION produces a select list whose elements are contained in *list1* and *list2*. *list3* contains no duplicates, and the order of select list elements is not defined.



DIFFERENCE produces a select list whose elements are the remainder of *list1* after the elements of *list2* that are also in *list1* are subtracted from it. *list3* contains no duplicates, and the order of select list elements is not defined.

Figure 1-1. MERGE.LIST Results

Use MESSAGE to send a message to another user currently logged in or to the system console. You can also use MESSAGE to enable or disable receive mode for all messages.

Syntax

MESSAGE [*user* | *number* | **–ACCEPT** | **–REJECT** | **–STATUS** [**ME**]]

Qualifiers

user The user name of the person to whom you want to send a message.

Windows NT. You can specify a full *domain**username* which sends a message only to the specified user in the specified domain. If you specify just a user name, the message goes to all users with the same user name in all domains. If you specify just a domain, the message goes to all users in that domain. If you do not specify *user*, MESSAGE sends the message to the system console.

number **UNIX**. The terminal number specified in the "tty" column in output from the STATUS USERS command.

Windows NT. The UniVerse user number specified in the output from a LISTU command.

–ACCEPT Enables receive mode for all messages.

–REJECT Disables receive mode for all messages.

–STATUS Displays the status of receive mode for all users.

ME Displays the status of receive mode for all users with your user name

Description

MESSAGE prompts you to enter the text of your message. Pressing **Return** ends the message and sends it.

UNIX. You can send a message to any user logged in to a UNIX system.

Windows NT. You can send a message only to other UniVerse users.

Example

```
>MESSAGE
TO OPERATOR(console) PLEASE MOUNT TAPE1<Return>
message to OPERATOR(console) sent
```

```
>MESSAGE pts/16
TO lee(pts/16) PLEASE LOG OUT<Return>
message to lee(pts/16) sent
```

Use MKFILELIST to create a saved select list of files to activate for transaction logging. You must be a UniVerse Administrator logged in to the UV account to use MKFILELIST.

Syntax

MKFILELIST *account listname*

Qualifiers

account The name of the account whose files you want to list. Define *account* in the UV.ACCOUNT file in the UV account.

listname The record ID of the saved select list.

Description

MKFILELIST creates a select list and saves it in the &SAVEDLISTS& file. Each line in the saved list contains the account name and a filename, separated by a colon. MKFILELIST lists all files defined in the VOC file of the specified account, except for files whose names begin with ampersand (&).

The saved list includes type 1 and type 19 files defined in your account. You may want to remove the names of these files from the list because you cannot activate or deactivate such files for transaction logging.

You can use the EDIT.LIST command to add or delete files in this list. The files in the list need not all be in the same account.

Use the ACTLIST command to activate the files in the list for transaction logging.

Example

This example creates a saved select list called INV.FILE.LIST in the &SAVEDLISTS& file. Each file in the INVENTORY account is listed on a separate line in the format `INVENTORY:`*`filename`*.

```
>MKFILELIST INVENTORY INV.FILE.LIST
```

The saved list looks like this:

```
       INV.FILE.LIST
0001:  INVENTORY:APP.PROGS
0002:  INVENTORY:APP.PROGS.O
```

```
0003: INVENTORY:BASIC.HELP
0004: INVENTORY:BIN
0005: INVENTORY:BLTRS
0006: INVENTORY:BOOKS
0007: INVENTORY:BP
0008: INVENTORY:BP.L
0009: INVENTORY:BP.O
0010: INVENTORY:CLASSES.DOC
0011: INVENTORY:CUSTOMERS
    .
    .
    .
```

Use MOTIF to display a UniVerse menu in Motif format.

Syntax

MOTIF *menu.name*

Qualifier

menu.name The record ID of the VOC menu entry that invokes the menu. The options listed on the menu that you invoke must call submenus.

Description

When you display a menu in Motif format, the title of the menu appears at the top of the screen. Under the title, options of the main menu are displayed in a menu bar. The first menu option is highlighted. Each option in the menu bar stands for a pull-down menu that scrolls down from the main menu bar when the user selects an option.

Menus list actions that can be performed and options that display submenus (*cascading* menus). Options followed by an arrow (=>) display a submenu.

The options on the submenus are names or descriptions of UniVerse sentences.

To display a submenu, highlight the option, then select it. To start an action, simply select it. If a data entry screen appears, instructions in the lower part of the screen prompt you to enter the appropriate data. System messages also appear at the lower part of the screen.

Certain responses work at all levels of a Motif menu system. At any menu bar, use the **Right Arrow** key (→) and the **Left Arrow** key (←) to move the highlight to the option you want.

Note that → does one of two things. If the highlighted menu item calls a submenu, pressing → displays the submenu. If the item does not call a submenu, pressing → displays the submenu belonging to the next option on the main menu bar.

To select the highlighted option, press **Return** or **Spacebar**. To move to an option and select it with one keystroke, press the capitalized letter (*mnemonic*) of the option you want. The mnemonic is not always the first letter of an option. If your keyboard does not have arrow keys, you can use the mnemonic letters to move around the menu system and make selections.

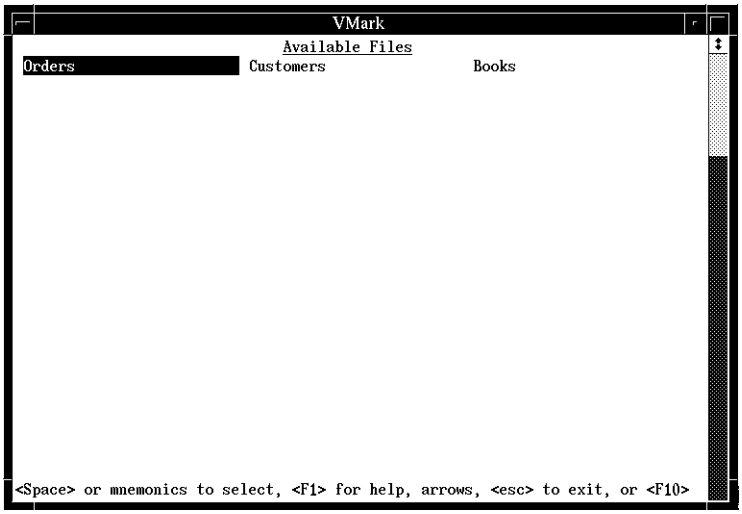
To move the cursor up and down in the submenus, use ↑ and ↓ . Note that ↑ does not work on menu bars, and ↓ works only if there is a submenu. To move from a submenu to the one immediately above it, press ←. To return directly to the main menu level from any submenu, press **F10**.

If you want to exit from any Motif menu or submenu and return to the UniVerse prompt, press **Esc**.

Examples

This example shows the LIST.FILES menu in Motif format:

```
>MOTIF LIST.FILES
```



The next example shows the LIST.FILES menu in standard UniVerse format:

```
>LIST.FILES
Available Files

 1. ORDERS
 2. CUSTOMERS
 3. BOOKS

Which would you like? ( 1 - 3 )  ?
```

Use NOTIFY to specify whether to display messages from phantom processes instantly or when UniVerse displays the next system prompt. When you enter UniVerse, NOTIFY OFF is in effect.

Syntax

NOTIFY { **ON** | **OFF** }

Qualifiers

ON	Messages appear immediately.
OFF	Messages appear when UniVerse displays the next system prompt (>).

NSELECT

Use NSELECT to create a select list of a subset of data elements contained in an active select list. NSELECT selects only those elements from the active select list that are *not* in a specified file. The subset of elements becomes the currently active select list.

Syntax

NSELECT [**DICT**] *filename* [**FROM** *n*] [**TO** *n*]

Qualifiers

DICT	Specifies a file dictionary.
filename	The name of the file against which NSELECT compares the currently active select list.
FROM *n*	Uses select list *n*. *n* is a number from 0 through 10. The default select list is 0.
TO *n*	Uses select list *n*. *n* is a number from 0 through 10. The default select list is 0.

Example

This example first lists the contents of two files, ONE and TWO:

```
>SORT ONE
SORT ONE 11:07:20am 20 Oct 1995 PAGE  1
ONE.......

1
2
4
5
6

5 records listed.

>SORT TWO
SORT TWO 11:07:21am 20 Oct 1995 PAGE  1
TWO.......

1
2
```

```
3
4

4 records listed.
```

Next, a SELECT command creates select list 2, which contains record IDs in file ONE, and an NSELECT command creates select list 1, which contains only record IDs in file TWO that are not in select list 2. The LIST command lists the records in file ONE that are specified by the active select list (select list 1).

```
>SELECT ONE TO 2

5 record(s) selected to SELECT list #2.
>>NSELECT TWO FROM 2 TO 1

2 record(s) selected to SELECT list #1.
>>LIST ONE FROM 1
LIST ONE FROM 1 11:07:22am  20 Oct 1995  PAGE    1
ONE.......

6
5

2 records listed.
```

OFF

Use OFF to log out of the UniVerse environment or to kill a phantom process.

Syntax

OFF [*–pid#*]

Qualifier

–pid# The process number of a phantom process to log out.

Description

When you log out, UniVerse closes all files that you have been using, releases any devices assigned to your terminal, and discards the sentence stack if the VOC file STACKWRITE entry is OFF.

The login name for the *–pid#* qualifier must be the same as your login name. For more information about phantom processes, see the PHANTOM command.

UNIX System V. OFF returns you to the system login prompt. When you use OFF as a verb, OFF is a synonym for the LOGOUT command.

UNIX Berkeley. OFF works like QUIT.

Windows NT. The behavior depends on how you accessed UniVerse. If you accessed UniVerse from a Windows NT command window, OFF terminates the UniVerse session and returns control to the command window. If you accessed UniVerse from a telnet interface, OFF terminates UniVerse and the telnet session.

Use ON.ABORT to execute a stored sequence of commands when a program aborts.

Syntax

ON.ABORT

Description

The ON.ABORT record in the VOC file executes when a program aborts. An ON.ABORT entry must be a sentence, a paragraph, a menu, a proc, a BASIC program, a verb, or a remote pointer to one of these.

When you first create your UniVerse account, the VOC file does not contain an ON.ABORT entry. You can create or change an ON.ABORT entry in the VOC file at any time. If there is no ON.ABORT entry in the VOC file, you are returned to the UniVerse system prompt when a program aborts.

You can use the ON.ABORT record to ensure that certain commands are processed after a fatal error before you are returned to the UniVerse system prompt or to rerun the application in which the error occurred.

Example

This example illustrates an ON.ABORT paragraph that alerts you to contact your UniVerse Administrator to prevent you from returning to the UniVerse system prompt if your application aborts:

```
    ON.ABORT
001 PA
002 DISPLAY You have aborted from the application.
003 DISPLAY Please contact the system administrator.
004 IF <<Enter Q to log off completely or any other key to continue>>
= "Q" THEN GO END
005 LOGIN               * RUN LOGIN PARAGRAPH
006 GO EXITPA
007 END:  LOGOUT
008 EXITPA:
```

ON.EXIT

Use ON.EXIT to execute a stored sequence of commands when you exit UniVerse.

Syntax

ON.EXIT

Description

The ON.EXIT entry in the VOC file executes when you exit UniVerse. An ON.EXIT entry must be a sentence, a paragraph, a menu, a proc, a BASIC program, a verb, or a remote pointer to one of these.

When you first create your UniVerse account, the VOC file does not contain an ON.EXIT entry. You can create or change an ON.EXIT entry in the VOC file at any time. If there is no ON.EXIT entry in the VOC file, you exit and return to where you invoked UniVerse, or log out altogether, depending on how your UniVerse environment is configured.

You can use the ON.EXIT record to ensure that certain commands are processed before you leave UniVerse or to display the most recently updated records in a file.

Example

This example automatically starts the ON.EXIT paragraph when you exit UniVerse. The paragraph resets the line printer, prints the most recent accounting reports, and displays the reports in the spool queue:

```
    ON.EXIT
001 PA
002 SETPTR ,,,,,3, BRIEF
003 SELECT &HOLD& WITH @ID LIKE "ACCT..."
004 SPOOL &HOLD&
005 SPOOL -LIST
```

Use P.ATT to request control of a printer.

Syntax

P.ATT *n* [**–WAIT**]

Qualifiers

n	The number of the printer you want to control.
–WAIT	Queues your request for control, waiting until the user who currently controls the printer logs out or releases control of the printer with P.DET.

Description

If someone else is using the printer you want to attach, the following message appears:

```
DEVICE IN USE
```

If that happens, use the –WAIT option to avoid repeating the command while someone else is using the printer.

If you try to run a process requiring control of the printer and you do not use P.ATT, the following message appears:

```
DEVICE NOT ASSIGNED
```

P.ATT is a BASIC program in the UV account's BP file. P.ATT executes an ASSIGN command with the proper arguments.

P.DET

Use P.DET to release the printer that you attached to your control using P.ATT. This lets other users assign the printer for their use. Enter **P.DET** at the same terminal where you entered the P.ATT command.

Syntax

P.DET *n*

Qualifier

n The number of the printer specified by a previous P.ATT command.

Description

When you log out, UniVerse automatically releases any devices, including printers, that have been assigned to you.

Use PAGE.MESSAGE to suppress the message `Press any key to continue...` at the end of each page of reports that extend beyond one page.

Syntax

PAGE.MESSAGE [**ON** | **OFF**]

Qualifiers

ON	Turns on page message.
OFF	Turns off page message.

Description

The default state is to display the message. Disabling the message suppresses it and makes one extra line available at the bottom of each page. The cursor goes to the end of the last printed line, and no message appears. Output does not scroll beyond each page.

PAGE.MESSAGE with no arguments displays the current state.

PASSWD

Use PASSWD to set or change the password for your current login name.

Syntax

PASSWD [*name*]

Qualifier

name A login ID. If you do not specify *name*, your login ID is used by default. You must be a UniVerse Administrator to change a password you do not own.

Description

If you do not enter your old password correctly, the message `Sorry` appears.

If you do not enter the new password the same way twice, PASSWD displays the following message:

```
Mismatch - password unchanged.
```

Example

```
>PASSWD
Changing password for jones
Old password:
New password:
Retype new password:
```

Use PHANTOM to start a process that executes in the background. A phantom process cannot require input from the terminal.

Syntax

PHANTOM [**BRIEF**] [**SQUAWK**] *command*

Qualifiers

BRIEF Directs output from the phantom process to the null device. Messages are not suppressed by the BRIEF option.

SQUAWK Displays the record ID of the record created in the &PH& file by the phantom process.

command The command text. The command can be a stored sentence or paragraph or a UniVerse command. *command* can be up to 25 characters.

Description

There is a system-wide limit on the number of processes that you can initiate. If you can start no more processes when you issue a PHANTOM command, the following message appears:

```
NO FREE PHANTOMS
You cannot run a phantom process now.   Wait a while, then try again.
```

If the space is available, the process begins and displays a message similar to the following:

`Phantom process started as Process ID` *`pid#`*.

The operating system assigns the process ID number, *pid#*.

A phantom process cannot use any terminal services. Use DATA statements in a paragraph to provide input to a phantom process. For example, the following paragraph runs the BASIC program MYPROG and supplies input to it using two DATA statements:

```
       BACKGROUND
0001:  PA
0002:  RUN BP MYPROG
0003:  DATA A
0003:  DATA B
```

To run MYPROG as a phantom process, enter the following at the system prompt:

```
>PHANTOM BACKGROUND
```

If a process issues a request for input that is not satisfied by DATA statements, UniVerse logs out the process.

Output from phantom processes is stored in the type 1 file &PH&. Each phantom process creates a record in the &PH& file with a record ID in the following format:

phantom.verb_time_date

phantom.verb is the first word in *command* and *time_date* is a unique identifier based on the time and date the process was started. UniVerse directs terminal output to this record. If a phantom process does not produce any output, it creates an empty record. Delete an &PH& file record when you no longer need it, so the &PH& file does not become too large. (For more information, see &PH&.)

You can display the output of a phantom process from your terminal. For more information on displaying another user's output, see the TANDEM command.

Use STATUS ME to monitor the phantom process. The phantom process has the same user ID as your own.

If you are logged in when the phantom process finishes, UniVerse notifies you. If NOTIFY ON is set, the message appears on your screen immediately. Otherwise the message appears when the next UniVerse prompt (>) appears. See NOTIFY for more information.

Use the LOGOUT command to stop a phantom process from the same terminal where you started it. The UniVerse Administrator can log out any phantom process on the system.

To make a phantom job the same as a job run from the command line, a phantom process runs the LOGIN paragraph or proc when it starts up.

When a phantom process runs your LOGIN paragraph which in turn runs a menu program, undesirable results can occur (when, for example, the phantom process produces a report).

You can structure your LOGIN paragraph to avoid these problems. Put commands to be executed by regular users and phantoms in the top section of the LOGIN paragraph. Follow this section with a command line that exits the LOGIN paragraph if it is being executed by a phantom process.

To check whether a phantom process is running the LOGIN paragraph, put the following line near the beginning of the paragraph:

```
IF @TTY = 'phantom' THEN GO END.OF.LOGIN
```

Put commands that phantoms should not execute in the last section of the LOGIN paragraph. The last line of the LOGIN paragraph must be the following label:

```
END.OF.LOGIN:
```

PORT.STATUS

Use PORT.STATUS to list currently active UniVerse jobs on the system. You can execute the PORT.STATUS command only from the UV account.

Syntax

PORT.STATUS [**USER** *name*] [**PORT** *number*] [**DEVICE** *pathname*]
[**PID** *process#*] [**FILEMAP**] [**LAYER.STACK**] [**MFILE.HIST**]
[**LOCK.HIST**] [{ **ENABLE** | **DISABLE** } **LOCK.HIST**]
[**ODBC.CONNECTIONS**] [**LPTR**]

Qualifiers

USER — Limits the report to jobs owned by user *name*.

Windows NT. This is the user name, with or without the domain name; for example, *vmark\jim* and *jim* are both acceptable.

PORT — Limits the report to jobs running on port *number*.

DEVICE — Limits the report to jobs attached to the device specified by *pathname*. Windows NT does not support this option.

PID — Limits the report to the process specified by *process#*.

LOCK.HIST — Logs concurrency control operations.

ENABLE LOCK.HIST — Enables logging of concurrency control operations.

DISABLE LOCK.HIST — Disables logging of concurrency control operations.

LPTR — Sends the report to the printer.

The following options require that only one session be specified:

FILEMAP — Generates a list of all files currently being used by the specified job.

LAYER.STACK — Generates a process layer stack dump for the indicated job.

MFILE.HIST — Lists the most recent log of rotating file pool (MFILE) operations.

LOCK.HIST Lists the last 50 concurrency control operations. Logging must previously be enabled (use the ENABLE LOCK.HIST option) in order for LOCK.HIST to work.

ODBC.CONNECTIONS
Lists the data source name, the DBMS type, and the network node name for the connection between the UniVerse system and the server.

Examples

The PORT.STATUS command with no options produces a report that looks like this:

```
>PORT.STATUS

There are currently 5 UniVerse sessions; 5 interactive, 0 phantom

Pid..  User name. Who  Port name..  Last command processed...........
 6002  walter      13  /dev/ttyp2   PORT.STATUS
 5047  cac         16  /dev/ttyp8   LIST CONTACTS <<I2,Enter vendor id>>
 5812  tamara      26  /dev/ttypd   SELECT IB WITH DESC LIKE '...LOCATE...'
 5844  tamara      47  /dev/ttyq8   LIST IB LONG.DESC FIXED.AT.ANY
 5822  tamara      50  /dev/ttyq7   LIST IB LONG.DESC FIXED.AT.ANY
```

UNIX. The “Who” column lists the port number, and the “Port name” column lists the device pathname of the session.

Windows NT. The “Who” column is not displayed, as it the same as the port number, and the “User name” column lists the domain and the user name.

The next example uses PORT.STATUS with the LOCK.HIST option to list the last concurrency control operations for the user philippe. The “File”, “Group”, and “Record Lock” columns list the type of lock (the Lmode code from the LIST.READU display). The “Group” column lists the logical disk address of the group, or its offset in bytes from the start of the file. It corresponds to the G-Address from the LIST.READU display.

```
>PORT.STATUS USER philippe LOCK.HIST

There are currently 1 UniVerse sessions; 1 interactive, 0 phantom

Pid.. User name.  Who  Port name..... Last command processed...............
18468 philippe     26  /dev/pts/34    PORT.STATUS USER philippe LOCK.HIST

File name.....................................................File No  Chan
VOC                                                                 4     5
```

```
SYS.MESSAGE                                                          1     4
SYS.MESSAGE                                                         17     7
VOC                                                                  8     6

                                  File Group Record
Lock operation File No  Group...  Lock Lock  Lock      Caller...
DBrsemv              4  0x00008400     RD              DBread
DBrsemp              4  0x00008400     RD              DBread
```

The next example uses the PORT.STATUS command with the ODBC.CONNECTIONS option to list information about a BASIC SQL Client Interface connection established for process number 5333:

```
>PORT.STATUS PID 5333 ODBC.CONNECTIONS

There are currently 1 UniVerse sessions; 1 interactive, 0 phantom

Pid..  User name.  Who  Port name....Last command processed.............
 5333  enf         76  /dev/pts/62   RUN BP LOCALTEST rempubs enf wolfman0
/dbms/enf/newsqlco [ LOCALTEST @ 0x41C ]

Data source.......................DBMS..........Node................

rempubs                            UNIVERSE      pubs
```

The “Data source” column lists the name defined in the *uvodbc.config* file, the “DBMS” column lists the type of database used to access the data, and the “Node” column lists the server the DBMS resides on.

Windows NT. Details for the current process (this user) are always shown as ”Unavailable”.

Use PRIME to find the prime numbers closest to a given number.

Syntax

PRIME *n*

Qualifier

n The number you want to examine.

Description

PRIME returns two numbers, the next highest prime and the next lowest prime. This is useful for determining what number to use as the modulo for a file. Using a prime number for the modulo minimizes hashing conflicts and distributes records evenly.

Example

```
>PRIME 45
Next lower prime number:  43.
Next higher prime number: 47.
```

PRINT.ADMIN

Use PRINT.ADMIN to list the status of printers and spooler queues, to change print job characteristics (such as number of copies to print, which printer or form to use, and so on), and to change the status of print jobs (for example, kill a job, suspend and resume a print job, and so on).

This command is not supported on Windows NT systems.

Syntax

PRINT.ADMIN

Description

PRINT.ADMIN invokes the Printer Administration menu. The menu comprises three submenus, one to list printer and spooler queue status, one to control print jobs, and one to change the characteristics of print jobs.

Use PTERM to set and display terminal characteristics. If you enter PTERM with no options, PTERM lists the options on your terminal.

Syntax

PTERM [**LPTR** | **MTU** [*channel*]] [**DISPLAY**] [*option setting*]

Qualifiers

LPTR Specifies the terminal characteristics of a line printer channel. *channel* can be a number from 0 through 225. The default is 0.

MTU Specifies the terminal characteristics of a magnetic tape channel. *channel* can be a number from 0 through 7. The default is 0.

DISPLAY Displays a list of the current terminal characteristics.

option The terminal characteristic you want to set.

setting The new setting for the option.

options can be any of the following. Each option includes a list of possible settings.

BAUD Sets the baud rate of your terminal.

n The rate to be set. It can be 50, 75, 110, 134, 150, 200, 300, 600, 1200, 1800, 2400, 4800, 9600, EXTA, or EXTB. Zero (0) hangs up the dataset connection.

BGSTOP Stops a background job if it tries to send output to the terminal.

ON Stops any job running in the background if it attempts to output to your terminal.

OFF Causes background terminal output to be multiplexed with the foreground output.

BREAK Causes the **Intr** (interrupt), **Quit**, **Susp** (suspend), and **Dsusp** (delayed-suspend) keys to cause a BREAK condition within UniVerse. Berkeley systems support this by setting the above keys to their default values.

ON The **Intr**, **Quit**, **Susp**, and **Dsusp** (delayed-suspend) keys cause a BREAK condition.

	OFF	Treats the **Intr**, **Quit**, **Susp**, and **Dsusp** keys as normal input characters.
	INTR	Treats the **Break** key as **Intr**.
	IGNORE	Ignores the **Break** key, no interrupt is generated.
	NUL	The **Break** key inputs a NUL (ASCII 0) character.
BRK	Can be used by special programs that require input to terminate on a character other than a newline. UniVerse treats the BRK character as a newline.	
	ON	Sets the BRK character to **Return** (**Ctrl-M**).
	OFF	Turns off the BRK character.
	c	Sets the BRK character to the character *c*.
BSDELAY	Sets the backspace delay.	
	ON	Specifies a delay of about .05 seconds whenever a backspace is output.
	OFF	Specifies no delay upon output of a backspace.
CASE	Performs various conversions on uppercase and lowercase characters.	
	INVERT	Converts uppercase characters to lowercase and lowercase characters to uppercase on input.
	NOINVERT	No case conversions occur.
	UC-IN	Translates uppercase input to lowercase (which might be inverted to uppercase).
	LC-IN	No translation of case on input (even though it still might be inverted.)
	UC-OUT	Translates lowercase output to uppercase.
	LC-OUT	No translation of case on output.
	XCASE	Precedes uppercase output by a backslash (\ ) to distinguish it from lowercase. This is useful when UC-OUT is set because in that setting upper- and lowercase are printed as uppercase.

	NOXCASE	No distinction on output between upper- and lowercase.
	UC	Translates uppercase input to lowercase (which might be inverted to uppercase) and lowercase output to uppercase. On Berkeley systems this option also sets XCASE.
	LC	No translation of case on either input (even though it still might be inverted) or output. On Berkeley systems this option also sets NOXCASE.
CRMODE	Sets the carriage-return mode.	
	INLCR	Converts newline to carriage return on input.
	NOINLCR	Prohibits conversion of newline to carriage return on input.
	IGNCR	Ignores carriage return on input.
	NOIGNCR	Does not ignore carriage return on input.
	ICRNL	Converts carriage return to newline on input.
	NOICRNL	Prohibits conversion of carriage return to newline on input.
	ONLCR	Converts newline to newline, carriage return on output.
	NOONLCR	Prohibits conversion of newline to newline, carriage return on output.
	OCRNL	Converts carriage return to newline on output.
	NOOCRNL	Prohibits conversion of carriage return to newline on output.
	ONOCR	Prohibits output of carriage return when cursor is in column 0.
	NOONOCR	Outputs carriage return when cursor is in column 0.
	ONLRET	Newline performs carriage return function.
	NOONLRET	Newline does not perform carriage return function.
	ON	Sets ICRNL and ONLCR, and resets all other values.
	OFF	Resets all CRMODE values.

DATABITS Changes the number of data bits on the terminal line protocol. Settings: 5, 6, 7, 8.

DSUSP Sets the DSUSP (delayed-suspend) character. This character acts like the SUSP (suspend) character except that no action is taken until the process actually inputs the character. In this way, the DSUSP is a way to type-ahead a SUSP.

- ON Sets the DSUSP character to **Ctrl-Y**.
- OFF Turns off the DSUSP character.
- *c* Sets the DSUSP character to the character *c*.

DTR Turns Data Terminal Ready handshaking on or off.

- ON Turns on Data Terminal Ready handshaking. Loss of DTR is treated the same as the input of the STOP character.
- OFF Turns off Data Terminal Ready handshaking. Loss of DTR is treated as a hang-up, and foreground jobs are terminated.

ECHO Sets terminal echo characteristics.

- ON Turns the terminal echo on.
- OFF Turns the terminal echo off.
- FAST Erases deleted characters from the screen.
- MEDIUM Erases deleted characters from the screen. The KILL character causes a new line in this mode.
- SLOW Backspaces over the deleted characters but does not erase their images from the screen. The KILL character causes a new line in this mode.
- PRINTER Used for printing terminals so that deleted characters echo backward within \ and /.
- CTRL Echoes all control characters as ^ followed by the appropriate alphabetic character.
- NOCTRL Echoes all control characters as nonprintable control characters.

	LF	Echoes the newline character even when the echo is turned off. This mode is useful for some half-duplex terminals.
	NOLF	The newline character does not echo when the echo is turned off.
EOF	Sets the end-of-file mark character. This character terminates input to many UNIX commands (*mail*, *dc*, and so on). UniVerse treats the EOF character as a newline.	
	ON	Sets the end-of-file mark character to **Ctrl-D**.
	OFF	Turns off the end-of-file mark character.
	c	Sets the end-of-file mark character to the character *c*.
EOL	The System V UNIX equivalent of the Berkeley UNIX BRK character; its uses are the same. UniVerse treats the EOL character as a newline.	
	ON	Sets the end-of-line mark character to **Return** (**Ctrl-M**).
	OFF	Turns off the end-of-line mark character.
	c	Sets the end-of line mark character to the character *c*.
EOL2	Sets a second end-of-line mark character.	
	ON	Sets the second end-of-line mark character to **Esc** (**Ctrl-[**).
	OFF	Turns off the second end-of-line mark character.
	c	Sets the second end-of-line mark character to the character *c*.
ERASE	Sets the character-erase character. The character-erase character deletes the previous character from the input.	
	ON	Sets the character-erase character to **Backspace** (**Ctrl-H**).
	OFF	Turns off the character-erase character.
	c	Sets the character-erase character to the character *c*.

FFDELAY Sets the delay before formfeed.

0	Pages are sent to the terminal and the line printer, but does not print the clear-screen at the beginning of each page on the terminal, and sends no formfeeds to the line printer.
1	Sends clear-screens to the terminal, but does not send formfeeds to the line printer.
2	Sends clear-screens to the terminal and formfeeds to the line printer; output of a formfeed causes no delay.
3	Sends clear-screens to the terminal and formfeeds to the line printer; output of a formfeed causes a two-second delay.

FILL Causes all delays (FFDELAY, LFDELAY, BSDELAY, TABS, VTDELAY) to pause; they do not use fill characters.

ON	All delays use fill characters. The fill character can be either a NUL or a DEL (see below).
OFF	All delays pause; they do not use fill characters.
NUL	When delays use fill characters, use the NUL character.
DEL	When delays use fill characters, use the DEL character.

FLUSH Sets the FLUSH character. The FLUSH character stops all output to the terminal. Unlike the STOP character, all output is lost. To resume output, another FLUSH character must be input.

ON	Sets the flush character to **Ctrl-O**.
OFF	Turns off the flush character.
c	Sets the flush character to the character *c*.

FMC Sets the field mark character.

ON	Sets the field mark character to **Ctrl-^**.
OFF	Turns off the field mark character.
c	Sets the field mark character to the character *c*.

INBUFF Determines how the input buffer handles input characters.

- ON — Input characters are not transmitted until a carriage return is received. Same as MODE LINE.
- OFF — Input characters are transmitted as they are received (like raw mode). The difference from raw mode is that for networking the data is not packetized until a carriage return is received. Same as MODE EMULATE.

INPUTCTL Enables or disables input of control characters.

- ON — Allows input of control characters.
- OFF — Disallows input of control characters.
- TCL.RESET — Disallows input of control characters until TCL level is reached.

INTR Sets the INTR (interrupt) character. The INTR character terminates a currently running job. UniVerse treats the INTR character as a BREAK condition.

- ON — Sets the INTR character to **Delete** (**Ctrl-?**).
- OFF — Turns off the INTR character.
- *c* — Sets the INTR character to the character *c*.

KILL Sets the KILL character. The KILL character erases the entire input line.

- ON — Sets the KILL character to **Ctrl-X**.
- OFF — Turns off the KILL character.
- *c* — Sets the KILL character to the character *c*.

LCONT Sets the line-continue character. The line-continue character is a short-hand way of extending an input line at the Command Language prompt. Typing the LCONT (line-continue) character is the same as entering an underscore (_) followed by a newline.

- ON — Sets the line-continue character to **Ctrl-_** .
- OFF — Turns off the line-continue character.
- *c* — Sets the line-continue character to the character *c*.

LFDELAY Sets the delay before a linefeed.

0	Specifies no delay for each newline.
1	A delay of about .08 seconds occurs after each newline.
2	A delay of about .10 seconds occurs after each newline.
3	A delay of about .16 seconds occurs after each newline.
4	A delay of about .18 seconds occurs after each newline.
5	A delay of about .26 seconds occurs after each newline.
6	A delay dependent on the column position occurs after each newline. This mode has been tuned for Teletype model 37s.
7	A delay dependent on the column position + about .08 seconds occurs after each newline.
8	A delay dependent on the column position + about .16 seconds occurs after each newline.

LITOUT Enables or disables postprocessing of output characters.

ON	Outputs characters with normal postprocessing.
OFF	Outputs characters without postprocessing.

LNEXT Sets the literal-next character. The literal-next character enters literally the next character typed; no input processing occurs. LNEXT (literal-next) can be used to enter the ERASE character literally into text. **This option has no effect when used in UniVerse.**

ON	Sets the literal-next character to **Ctrl-V**.
OFF	Turns off the literal-next character.
c	Sets the literal-next character to the character *c*.

MODE Determines how the input buffer handles input characters.

LINE	Transmits no input characters until a carriage return is received. Same as INBUFF ON.
RAW	Transmits input characters as they are received.

	CHAR	Transmits input characters as they are received, except for special characters.
	EMULATE	Input characters are transmitted as they are received (like raw mode). The difference from raw mode is that for networking the data is not packetized until a carriage return is received. Same as INBUFF OFF.
NOHANG	Sets whether or not the loss of Data Terminal Ready (DTR) is to be ignored.	
	ON	Ignores loss of Data Terminal Ready; loss of carrier does not terminate a job.
	OFF	Treats loss of Data Terminal Ready as a hang up; terminates running jobs.
PARITY	Sets the parity.	
	NONE	Specifies that no parity generation is done for output, and enforces no parity checking on input.
	EVEN	Generates even parity for output and checks for even parity on input (if enabled).
	ODD	Generates odd parity for output, and checks for odd parity on input (if enabled).
	ENABLE	Enables parity input checking, provided that the parity mode is not set to NONE.
	DISABLE	Disables input parity; allows characters of any parity.
	ERR-IGN	Ignores errors (characters of the wrong parity) if input parity checking is enabled.
	ERR-MRK	Marks errors by simulating a special input sequence, if input parity checking is enabled. **You cannot use this mode in UniVerse. If set, it acts like ERR-IGN.**
	ERR-NUL	Inputs errors as the NUL character, if input parity checking is enabled.

PENDIN Automatically retypes input when background output disturbs the terminal screen.

- ON Automatically retypes input, and enters an ERASE character. **This mode has no effect in UniVerse.**
- OFF No automatic retyping of input.

QUIT Sets the QUIT character. The QUIT character terminates a currently running job and produces a core dump. UniVerse treats the QUIT character as a BREAK condition.

- ON Sets the QUIT character to **Ctrl-** .
- OFF Turns off the QUIT character.
- *c* Sets the QUIT character to the character *c*.

RPRNT Sets the reprint character. The reprint character redisplays the previous line. This is often useful when transmission errors or background output disturb the data on the terminal screen.

- ON Sets the reprint character to **Ctrl-R**.
- OFF Turns off the reprint character.
- *c* Sets the reprint character to the character *c*.

SMC Sets the subvalue mark character.

- ON Sets the subvalue mark character to **Ctrl-** .
- OFF Turns off the subvalue mark character.
- *c* Sets the subvalue mark character to the character *c*.

SQLNULL Sets the SQL null value character.

- ON Sets the null value character to **Ctrl-N**.
- OFF Turns off the null value character.
- *c* Sets the null value character to the character *c*.

START Sets the START character. The START character is the counterpart of the STOP character. START resumes output after it has been stopped. If the XON STARTANY option is set, any input character resumes

output, and the START character is the only character not entered as data.

ON	Sets the START character to **Ctrl-Q**.
OFF	Turns off the START character.
c	Sets the START character to the character *c*.

STOP Sets the STOP character. The STOP character temporarily stops output to the terminal screen. Typing the START character resumes printing of output.

ON	Sets the STOP character to **Ctrl-S**.
OFF	Turns off the STOP character.
c	Sets the STOP character to the character *c*.

STOPBITS Sets the number of stop bits on the terminal line protocol.

1	Sets the terminal line protocol for 1 stop bit.
2	Sets the terminal line protocol for 2 stop bits.

STRIP Determines whether or not to strip the eighth bit off input characters.

ON	Strips off the eighth bit.
OFF	Does not strip off the eighth bit.

SUSP Sets the SUSP (suspend) character. The SUSP character immediately stops the current job. UniVerse treats the SUSP character as a BREAK condition.

ON	Sets the SUSP character to **Ctrl-Z**.
OFF	Turns off the SUSP character.
c	Sets the SUSP character to the character *c*.

SWTCH Sets the SWTCH character. The SWTCH character is used in conjunction with *shl* to switch terminal input to the layering program (*shl*).

ON	Sets the SWTCH character to **Ctrl-Z**.
OFF	Turns off the SWTCH character.
c	Sets the SWTCH character to the character *c*.

TABS Expands a tab character on output to the proper number of spaces. Tab stops are set every eight columns. Some terminals (like the ADDS Viewpoint) use a tab character as a part of the cursor movement function; on these terminals TABS must be set to OFF for cursor movement to work properly.

- ON Turns on tab expansion.
- OFF Turns off tab expansion.

TILDE Enables or disables conversion of the tilde (~) character.

- ON Converts ~ to ` (accent grave) on output.
- OFF Does not convert ~ .

TMC Sets the text mark character.

- ON Sets the text mark character to **Ctrl-T**.
- OFF Turns off the text mark character.
- *c* Sets the text mark character to the character *c*.

VMC Sets the value mark character.

- ON Sets the value mark character to **Ctrl-]**.
- OFF Turns off the value mark character.
- *c* Sets the value mark character to the character *c*.

VTDELAY Sets the vertical tab delay.

- ON Specifies a two-second delay each time a vertical tab is output.
- OFF Specifies no delay time when a vertical tab is output.

WERASE Sets the word-erase character. The word-erase character deletes the previous word (up to, but not including, a space).

- ON Sets the word-erase character to **Ctrl-W**.
- OFF Turns off the word-erase character.
- *c* Sets the word-erase character to the character *c*.

XON Sets the X-ON and X-OFF characters.

Berkeley Systems. The X-OFF character is the STOP character and the X-ON is the START character. This option is implemented by setting STOP and START to their default values.

UNIX System V. The X-OFF character is always **Ctrl-S**, and the X-ON is always **Ctrl-Q**.

ON Turns on the X-OFF/X-ON protocol. When the computer receives an X-OFF, it stops all transmission until it receives an X-ON.

OFF Turns off the X-OFF/X-ON protocol. The X-OFF and the X-ON characters are treated as normal input. Berkeley systems implement this option by turning off the STOP and the START characters.

STARTANY Any character acts as X-ON, if X-OFF/X-ON is enabled.

NOSTARTANY
Requires the receipt of the X-OFF character to restart transmission.

TANDEM Causes the computer, when its input buffer is almost full, to transmit an X-OFF character to the terminal screen, and when the buffer is almost empty, to transmit an X-ON. This lets the computer communicate with another device, such as another computer.

NOTANDEM
Turns off the automatic X-OFF/X-ON mode.

Description

Berkeley systems do not support the following options:

DATABITS
EOL
EOL2
STOPBITS
STRIP
SWTCH
VTDELAY

UNIX System V. These systems do not support the following options:

BGSTOP
BRK
DSUSP
DTR
FLUSH
LNEXT
NOHANG
PENDIN
SUSP
TILDE

When specifying output-processing *stty* parameters such as ONLCR in a PTERM command or in the *sp.config* file, you must also specify –LITOUT to get the post-processing done.

For further discussion of terminal characteristics and settings, see the *stty* command in your UNIX documentation.

Examples

To display a list of PTERM options, enter the following:

```
>PTERM
PTERM options are:
ERASE    char | ON | OFF       KILL     char | ON | OFF
WERASE   char | ON | OFF       RPRNT    char | ON | OFF
INTR     char | ON | OFF       QUIT     char | ON | OFF
EOF      char | ON | OFF       EOL      char | ON | OFF
EOL2     char | ON | OFF       LCONT    char | ON | OFF
FMC      char | ON | OFF       VMC      char | ON | OFF
SMC      char | ON | OFF

BAUD     50 - 9600
BREAK
ON | OFF | INTR | IGNORE | NUL
BSDELAY  ON | OFF
CASE     INVERT | NOINVERT | LC-IN | LC-OUT | UC-IN | UC-OUT | XCASE |
NOXCASE
CRMODE   INLCR |  -INLCR | IGNCR |  -IGNCR | ICRNL  | -OICRNL |
         ONLCR |  -ONLCR | OCRNL |  -CRNL  | ONLRET | -ONLRET |
         ON | OFF
DATABITS 5 - 8
ECHO     ON | OFF | CTRL | NOCTRL | FAST | MEDIUM | SLOW | LF | NOLF
```

```
FFDELAY  0 - 3
FILL     ON | OFF | NUL | DEL
LFDELAY  0 - 8
PARITY   EVEN | ODD | NONE | ENABLE | DISABLE | ERR_IGN | ERR_MRK | ERR_NUL
STOPBITS 1 - 2
TABS     ON | OFF
VTDELAY  ON | OFF
XON      ON | OFF | STARTANY | NOSTARTANY | TANDEM | NOTANDEM
```

To display the current terminal settings, enter the following:

```
>PTERM DISPLAY
MODE            EMULATE
CC              INTR   = DEC QUIT    = ^\  SUSP   = ^Z  DSUSP  = ^Y
                SWITCH = OFF ERASE   = ^H  WERASE = ^W  KILL   = ^U
                LNEXT  = ^V  REPRINT = ^R  EOF    = ^D  EOL    = OFF
                EOL2   = OFF FLUSH   = ^O  START  = ^Q  START  = ^S
                LCONT  = ^_  FMC     = ^^  VMC    = ^ ] SMC    = ^ ]
                TMC    = ^T  SQLNULL = ^N
CARRIER         -RECEIVE -HANGUP -LOCAL
CASE            -UCIN -UCOUT -XCASE -INVERT
CRMODE          -INLCR -IGNCR -ICRNL -ONLCR -OCRNL -ONOCR -ONLRET
DELAY           BS0 CR0 FF0 LF0 VT0 TAB0 -FILL
ECHO            ECHO -ERASE -KILL -CTRL -LF
HANDSHAKE       -XON -ANY -TANDEM -DTR
OUTPUT          -POST -TILDE -BG -CS -EXPAND
PROTOCOL        LINE=0 BAUD=0 DATA=0 STOP=0 NONE DISABLE -STRIP
SIGNALS         -ENABLE -FLUSH BREAK=IGNORE
```

To set the ECHO parameter to SLOW, enter the following:

```
>PTERM ECHO SLOW
```

PTERM (Windows NT)

Use PTERM to set and display terminal characteristics. If you use PTERM with no options, PTERM lists the options on your terminal.

Syntax

PTERM [**LPTR** *channel*] [**DEVICE** *name*] [**DISPLAY**] [*option setting*]

Qualifiers

LPTR Specifies the terminal characteristics of a line printer channel. *channel* can be a number from 0 through 225. The default is 0.

DEVICE Specifies the device characteristics of a device. *name* is the name of the device as specified in the &DEVICE& file.

DISPLAY Displays a list of the current terminal characteristics.

option The terminal characteristic you want to set.

setting The new setting for the option.

options can be any of the following. Each option includes a list of possible settings.

BAUD Sets the baud rate of your terminal.

- *n* The rate to be set. It can be 50, 75, 110, 134, 150, 200, 300, 600, 1200, 1800, 2400, 4800, 9600, EXTA, or EXTB. Zero (0) hangs up the dataset connection.

CASE Performs various conversions on uppercase and lowercase characters.

- INVERT Converts uppercase characters to lowercase and lowercase characters to uppercase on input.
- NOINVERT No case conversions occur.

CRMODE Sets the carriage-return mode.

- ICRNL Converts carriage return to newline on input.
- NOICRNL Prohibits conversion of carriage return to newline on input.

ECHO Sets terminal echo characteristics.

- ON Turns the terminal echo on.
- OFF Turns the terminal echo off.
- CTRL Echoes all control characters as ^ followed by the appropriate alphabetic character.
- NOCTRL Echoes all control characters as nonprintable control characters. This option is not supported in DOS command windows.
- LF Echoes the newline character even when the echo is turned off. This mode is useful for some half-duplex terminals.
- NOLF The newline character does not echo when the echo is turned off.

ERASE Sets the character-erase character. The character-erase character deletes the previous character from the input.

- ON Sets the character-erase character to **Backspace** (**Ctrl-H**).
- OFF Turns off the character-erase character.
- *c* Sets the character-erase character to the character *c*.

FMC Sets the field mark character.

- ON Sets the field mark character to **Ctrl-^**.
- OFF Turns off the field mark character.
- *c* Sets the field mark character to the character *c*.

INBUFF Determines how the input buffer handles input characters.

- ON Input characters are not transmitted until a carriage return is received. Same as MODE LINE.
- OFF Input characters are transmitted as they are received (like raw mode). The difference from raw mode is that for networking the data is not packetized until a carriage return is received. Same as MODE EMULATE.

INPUTCTL Enables or disables input of control characters.

ON	Allows input of control characters.
OFF	Disallows input of control characters.
TCL.RESET	Disallows input of control characters until TCL level is reached.

INPUTMIN

Determines how input of control characters occurs.

ON	Input is not completed until at least one character has been received.
OFF	Input is completed immediately, or after a timeout period, whether or not characters have been received.

INPUTTIME

Sets the timeout value in tenths of a second.

INTR Sets the INTR (interrupt) character. The INTR character terminates a currently running job. UniVerse treats the INTR character as a BREAK condition.

ON	Sets the INTR character to **Delete** (**Ctrl-?**). Not supported from a DOS command window.
OFF	Turns off the INTR character. Not supported from a DOS command window.
c	Sets the INTR character to the character *c*. Not supported from a DOS command window.

KILL Sets the KILL character. The KILL character erases the entire input line.

ON	Sets the KILL character to **Ctrl-X**. Not supported from a DOS command window.
OFF	Turns off the KILL character. Not supported from a DOS command window.
c	Sets the KILL character to the character *c*.

LCONT Sets the line-continue character. The line-continue character is a short-hand way of extending an input line at the command language

prompt. Typing the LCONT (line-continue) character is the same as entering an underscore (_) followed by a newline.

ON	Sets the line-continue character to **Ctrl-_** .
OFF	Turns off the line-continue character.
c	Sets the line-continue character to the character *c*.

MODE Determines how the input buffer handles input characters.

RAW	Transmits input characters as they are received. This is the equivalent of setting INPUTMIN on and INPUTTIME to 0.
CHAR	Transmits input characters as they are received, except for special characters.
EMULATE	Input characters are transmitted as they are received (like raw mode). The difference from raw mode is that for networking the data is not packetized until a carriage return is received. Same as INBUFF OFF.
LINE	Input characters are not transmitted until a carriage return is received. Same as INBUFF ON.

PARITY Sets the parity.

NONE	Specifies that no parity generation is done for output, and enforces no parity checking on input.
EVEN	Generates even parity for output and checks for even parity on input (if enabled).
ODD	Generates odd parity for output, and checks for odd parity on input (if enabled).
ENABLE	Requests input parity checking with abort on error, so that any input parity error will cause a READSEQ or READBLK statement to take its ELSE clause.
DISABLE	Disables input parity checking.

	ERR-MRK	Requests the marking of parity errors. Any input character with a parity error is preceded by an item mark character (byte value 255).
	ERR-NUL	Requests the marking of parity errors. Any input character with a parity error is preceded by a NUL character (byte value 0).
RPRNT	Sets the reprint character. The reprint character redisplays the previous line. This is often useful when transmission errors or background output disturb the data on the terminal screen.	
	ON	Sets the reprint character to **Ctrl-R**.
	OFF	Turns off the reprint character.
	c	Sets the reprint character to the character *c*.
SMC	Sets the subvalue mark character.	
	ON	Sets the subvalue mark character to **Ctrl-** .
	OFF	Turns off the subvalue mark character.
	c	Sets the subvalue mark character to the character *c*.
SQLNULL	Sets the SQL null value character.	
	ON	Sets the null value character to **Ctrl-N**.
	OFF	Turns off the null value character.
	c	Sets the null value character to the character *c*.
STOPBITS	Sets the number of stop bits on the terminal line protocol.	
TMC	Sets the text mark character.	
	ON	Sets the text mark character to **Ctrl-T**.
	OFF	Turns off the text mark character.
	c	Sets the text mark character to the character *c*.
VMC	Sets the value mark character.	
	ON	Sets the value mark character to **Ctrl-]**.
	OFF	Turns off the value mark character.
	c	Sets the value mark character to the character *c*.

WERASE Sets the word-erase character. The word-erase character deletes the previous word (up to, but not including, a space).

- ON Sets the word-erase character to **Ctrl-W**.
- OFF Turns off the word-erase character.
- *c* Sets the word-erase character to the character *c*.

XON Sets the X-ON and X-OFF characters.

- ON Turns on the X-OFF/X-ON protocol. When the computer receives an X-OFF, it stops all transmission until it receives an X-ON.
- OFF Turns off the X-OFF/X-ON protocol. The X-OFF and the X-ON characters are treated as normal input.
- TANDEM Enables input X-OFF/X-ON processing.
- NOTANDEM Disables input X-OFF/X-ON processing.

Description

The allowable options for the PTERM command depend on the type of device being referenced: a console window, a telnet session, or a serial port. If an option is used for a device that is not supported, an error message is displayed.

Examples

To display a list of PTERM options, enter the following:

```
>PTERM
PTERM options are:
ERASE    char | ON | OFF       KILL     char | ON | OFF
WERASE   char | ON | OFF       RPRNT    char | ON | OFF
INTR     char | ON | OFF       QUIT     char | ON | OFF
EOF      char | ON | OFF       EOL      char | ON | OFF
EOL2     char | ON | OFF       LCONT    char | ON | OFF
FMC      char | ON | OFF       VMC      char | ON | OFF
SMC      char | ON | OFF

BAUD     50 - 9600
BREAK
ON | OFF | INTR | IGNORE | NUL
BSDELAY  ON | OFF
```

```
CASE     INVERT | NOINVERT | LC-IN | LC-OUT | UC-IN | UC-OUT | XCASE |
NOXCASE
CRMODE   INLCR |  -INLCR | IGNCR |  -IGNCR | ICRNL  | -OICRNL |
         ONLCR |  -ONLCR | OCRNL |  -CRNL  | ONLRET | -ONLRET |
         ON | OFF
DATABITS 5 - 8
ECHO     ON | OFF | CTRL | NOCTRL | FAST | MEDIUM | SLOW | LF | NOLF
FFDELAY  0 - 3
FILL     ON | OFF | NUL | DEL
LFDELAY  0 - 8
PARITY   EVEN | ODD | NONE | ENABLE | DISABLE | ERR_IGN | ERR_MRK | ERR_NUL
STOPBITS 1 - 2
TABS     ON | OFF
VTDELAY  ON | OFF
XON      ON | OFF | STARTANY | NOSTARTANY | TANDEM | NOTANDEM
```

To display the current terminal settings, enter the following:

```
>PTERM DISPLAY
MODE            EMULATE
CC              INTR   = DEC QUIT    = ^\  SUSP   = ^Z  DSUSP  = ^Y
                SWITCH = OFF ERASE   = ^H  WERASE = ^W  KILL   = ^U
                LNEXT  = ^V  REPRINT = ^R  EOF    = ^D  EOL    = OFF
                EOL2   = OFF FLUSH   = ^O  START  = ^Q  START  = ^S
                LCONT  = ^_  FMC     = ^^  VMC    = ^ ] SMC    = ^ ]
                TMC    = ^T  SQLNULL = ^N
CARRIER         -RECEIVE -HANGUP -LOCAL
CASE            -UCIN -UCOUT -XCASE -INVERT
CRMODE          -INLCR -IGNCR -ICRNL -ONLCR -OCRNL -ONOCR -ONLRET
DELAY           BS0 CR0 FF0 LF0 VT0 TAB0 -FILL
ECHO            ECHO -ERASE -KILL -CTRL -LF
HANDSHAKE       -XON -ANY -TANDEM -DTR
OUTPUT          -POST -TILDE -BG -CS -EXPAND
PROTOCOL        LINE=0 BAUD=0 DATA=0 STOP=0 NONE DISABLE -STRIP
SIGNALS         -ENABLE -FLUSH BREAK=IGNORE
```

To set the ECHO parameter to SLOW, enter the following:

```
>PTERM ECHO SLOW
```

Use PTIME to display information about your use of the system during the current terminal session. The nature of the information depends on how your system is configured.

Syntax

PTIME

Examples

UNIX. PTIME produces a report that looks like this:

```
>PTIME
You have been logged in for: 10 minutes 28 seconds

CPU times     :   16.049 user      24.166 system
Page faults   :      279 I/O          165 non I/O         0 swapout
Disk I/O      :      383 reads        877 writes
IPC messages  :        3 sent           4 received        0 signals
Context switch:     1183 voluntary     47 involuntary
>
```

Windows NT. PTIME produces a report that looks like this:

```
>PTIME
You have been logged in for: 20 minutes 11 seconds

CPU times: 0.500 user 0.430 system
>
```

QSELECT

Use QSELECT to create a select list containing values from a specified field or from all fields of selected records.

Syntax

QSELECT [**DICT**] *filename* [*records* | *] [*options*]

Qualifiers

DICT	Specifies the file dictionary.
filename	The name of a UniVerse file.
records	A list of record IDs.
*	Specifies all records in the file.

options can be any of the following:

SAVING *n*	Specifies a single field (the *n*th field) from which to extract values from each record.
TO *n*	Saves the select list in a numbered select list. *n* specifies the list number from 0 through 10.
FROM *n*	Supplies the *record.list* from a numbered select list. *n* specifies the list number from 0 through 10.

Description

You can supply an explicit record ID list on the command line. You can also use an active select list to select records.

QSELECT builds a select list from data it extracts from fields in one or more records in a file. QSELECT extracts data from all fields unless you use the SAVING keyword to specify data from one field. QSELECT stores multivalues as separate elements in the list.

Example

This example creates a select list whose elements come from field 3 of records 4309 and 7575 in the file SUN.MEMBER. The SAVE.LIST command saves the list under a default record ID, and the EDIT.LIST command edits the saved list.

```
>QSELECT SUN.MEMBER "4309" "7505" SAVING 3

2 record(s) selected to SELECT list #0.
>>SAVE.LIST

2 record(s) SAVEd to SELECT list "&TEMP3&".
>EDIT.LIST &TEMP3&
2 lines long.

----:P
0001:4309
0002:7505
Bottom at line 2.
----:Q
```

QUIT

Use QUIT or Q to exit UniVerse and return to your parent process.

Syntax

Q

QUIT

Description

When you quit, UniVerse closes all files that you have been using, releases any devices that have been assigned to your terminal, and discards the sentence stack if the STACKWRITE entry in the VOC file is OFF.

UNIX. If your UniVerse process is the child of a UNIX shell, the shell prompt appears. If your UniVerse process is not the child of a UNIX shell, the system login prompt appears.

Windows NT. The way this command works depends on how you accessed UniVerse. If you accessed UniVerse from a Windows NT command window, QUIT terminates the UniVerse session and returns control to the command window. If you accessed UniVerse from a telnet interface, QUIT terminates UniVerse and the telnet session.

Use RADIX to convert hexadecimal, octal, or binary integers to decimal integers, or to convert decimal integers to hexadecimal, octal, or binary integers. RADIX also lets you add, subtract, multiply, and divide integers in all four number bases.

Syntax

RADIX

Description

RADIX prompts for the type of action with the following message:

```
          XTD            OTD            BTD
          DTX            DTO            DTB

          ADDX           ADDO           ADDB           ADDD
          SUBX           SUBO           SUBB           SUBD
          MULX           MULO           MULB           MULD
          DIVX           DIVO           DIVB           DIVD
Input action code =
```

Enter one of the codes to specify the action you want. The following message appears:

```
Input Number.base String or New Action Code =
```

Enter a number or a new action code. RADIX performs the operation and then prompts for another action code.

You can specify the following action codes.

Conversion Codes

XTD	Converts from hexadecimal to decimal.
OTD	Converts from octal to decimal.
BTD	Converts from binary to decimal.
DTX	Converts from decimal to hexadecimal.
DTO	Converts from decimal to octal.
DTB	Converts from decimal to binary.

Addition Codes

ADDX	Adds hexadecimal numbers.
ADDO	Adds octal numbers.
ADDB	Adds binary numbers.
ADDD	Adds decimal numbers.

Subtraction Codes

SUBX	Subtracts hexadecimal numbers.
SUBO	Subtracts octal numbers.
SUBB	Subtracts binary numbers.
SUBD	Subtracts decimal numbers.

Multiplication Codes

MULX	Multiplies hexadecimal numbers.
MULO	Multiplies octal numbers.
MULB	Multiplies binary numbers.
MULD	Multiplies decimal numbers.

Division Codes

DIVX	Divides hexadecimal numbers.
DIVO	Divides octal numbers.
DIVB	Divides binary numbers.
DIVD	Divides decimal numbers.

Because ADDD and ADDB signify action codes (add decimal and add binary numbers respectively), you must enter the hex numbers ADDD and ADDB as 0ADDD and 0ADDB.

You can enter any action code at the system prompt as a command. If you also specify a value, RADIX performs the action, displays the answer, and prompts for a new number or action code. If you do not specify a number, RADIX prompts for it.

RADIX works with 32-bit signed numbers. For example, RADIX XTD 7FFFFFFF returns 2147483647. If you add 1 to that, the number overflows and RADIX returns –2147483648. Thus, operations on some very large numbers fail and others do not, depending on whether the result fits into a 32-bit number.

Example

The RADIX command in the following example displays the available action codes. The user enters **XTD** to convert a hexadecimal number to decimal, then enters the hex number **ABB**. Next the user enters **BTD** to convert a binary number to decimal, then enters the binary number **0101**. The user then enters **ADDD** to add the decimal numbers 4 and 12. Pressing **Return** returns the user to the system prompt.

```
>RADIX

        XTD             OTD             BTD
        DTX             DTO             DTB

        ADDX            ADDO            ADDB            ADDD
        SUBX            SUBO            SUBB            SUBD
        MULX            MULO            MULB            MULD
        DIVX            DIVO            DIVB            DIVD
Input action code = XTD

Input Hex String or New Action Code =   ABB
Decimal 2747
Input Hex String or New Action Code =   BTD
Input Binary String or New Action Code =   0101
Decimal 5
Input Binary String or New Action Code =   ADDD
Input Decimal String or New Action Code =   4
Input Decimal String = 12
Decimal 16
Input Decimal String or New Action Code =   <Return>
>
```

RAID

Use RAID to debug BASIC programs.

Syntax

RAID [*filename*] *program* [*options*]

Qualifiers

filename The name of the file where the program is stored. RAID appends .O to *filename* to locate and operate on the object code. If you do not specify *filename*, RAID assumes the BP file by default.

program The name of the record containing the source code of the program.

options can be any of the following:

NO.WARN	Suppresses all warning (nonfatal) error messages. If you do not specify NO.WARN, run-time error messages appear on the screen as they are encountered.
NO.PAGE	Turns off automatic paging. Programs that position the cursor with @ functions do not need to disable pagination.
LPTR	Spools the program output to the printer rather than to the terminal screen.
KEEP.COMMON	Maintains the values of variables in unnamed common if program execution is passed to another BASIC program with a CHAIN statement.
TRAP	Enters the RAID debugger instead of displaying warning (nonfatal) error messages.

Description

RAID can function as either an object code or a source code debugger. Thus, it is a powerful tool for detecting errors in UniVerse BASIC code. RAID lets you set and delete breakpoints, set watchpoints, step through and display source code, examine object addresses, and examine and modify variables. Use RAID in the same way you use RUN, to invoke the debugger just before program execution.

When a BASIC program is running, you can enter the RAID debugger by pressing the **Break** key and then selecting the break option D.

Table 1-1 contains the commands that are available in RAID. For syntax and a detailed description of each, see *UniVerse BASIC Programmer's Guide*.

Table 1-1. RAID Commands

Command	Description
line	Displays the specified line of the source code.
/[*string*]	Searches the source code for *string*.
B	Sets a RAID breakpoint.
C	Continues program execution.
D	Deletes a RAID breakpoint.
G	Goes to a line or address, and continues program execution.
H	Displays statistics for the program.
I	Displays and executes the next object code instruction.
L	Displays the next line to be executed.
M	Sets watchpoints.
Q	Quits RAID.
R	Runs the program.
S	Steps through the BASIC source code.
T	Displays the call stack trace.
V	Enters verbose mode for the M command.
V*	Prints the compiler version that generated the object code.
W	Displays the current window.
X	Displays the current object code instruction and address.
X*	Displays local run machine registers and variables.
Z	Displays the next 10 lines of source code.
$	Turns on instruction counting.
#	Turns on program timing.
+	Increments the current line.
–	Decrements the current line.
.	Displays object code instruction and address before execution.
variable/	Prints the value of *variable*.
variable!*string*	Changes the value of *variable* to *string*.

REBUILD.DF

Use REBUILD.DF to examine the headers of a distributed file and its part files. REBUILD.DF lists inconsistencies and fixes them.

Syntax

REBUILD.DF *dist.filename algorithm*

Qualifiers

dist.filename The name of a distributed file.

algorithm Can be either EXTERNAL, INTERNAL or SYSTEM. See the DEFINE.DF command for details about the partitioning algorithm.

INTERNAL { [[**DATA**] *filename*] *record.ID* | *expression* }

DATA Specifies that the algorithm expression is stored in the data file of *filename*. If you do not use DATA, the expression is stored in the dictionary of *filename*.

filename The name of the file containing the algorithm expression.

record.ID The ID of the record containing the algorithm expression. If you do not specify *filename*, the record is assumed to be an entry in the VOC file.

expression An I-descriptor expression used as the partitioning algorithm. Enclose *expression* in quotation marks if it contains spaces or if it is the same as a record ID in the VOC file.

EXTERNAL Specifies a routine as the partitioning algorithm that is external to UniVerse.

The EXTERNAL clause has the following syntax:

EXTERNAL *routine.name*

routine.name is the external routine used as the partitioning algorithm.

SYSTEM [*s*] Specifies the default partitioning algorithm. *s* is the character used as a separator in record IDs. A hyphen (–) separator is the default.

Description

REBUILD.DF reads the distributed file header and opens each part file to verify its pathname and part number. If there are inconsistencies, REBUILD.DF fixes them. It then removes part files with duplicate part numbers from the distributed file.

Example

This example fixes PARTFILE2's part number, corrects PARTFILE4's pathname, and removes PARTFILE1 from DIST.FILE. It then determines that two part files have the same part number (3) and removes them from DIST.FILE. The DEFINE.DF command adds the part files removed by REBUILD.DF back to DIST.FILE. Notice that the ADDING clause specifies the correct part number for PARTFILE2.

```
>REBUILD.DF DIST.FILE SYSTEM -

Compiling "@PART.ALGORITHM".
IF INDEX ( @ID , - , 1 ) THEN FIELD ( @ID , - , 1 ) ELSE ERROR
Compiling "@PART.ALGORITHM".
IF INDEX ( @ID , - , 1 ) THEN FIELD ( @ID , - , 1 ) ELSE ERROR
Compiling "@PART.ALGORITHM".
IF INDEX ( @ID , - , 1 ) THEN FIELD ( @ID , - , 1 ) ELSE ERROR


Rebuilding "DIST.FILE" - First Pass.

Examining "PARTFILE2".
Part number in PARTFILE2 has changed from 2 to 3.
Fixing part number for PARTFILE2.

Examinging "PARTFILE4".
Partfile "PARTFILE4" has been moved to /usr/ACCOUNTS/PARTFILE4.
Fixing pathname for "PARTFILE4".

Examining "PARTFILE1".
Part file "PARTFILE1" has an invalid part number of 0.
Invalid or missing Partblock for "PARTFILE1".
Removing PARTFILE1 from DIST.FILE.

Examining "PARTFILE3".
Rebuilding "DIST.FILE" - Second Pass.
```

```
Examining "PARTFILE2".
Warning: multiple occurrences of part number 3.
Removing PARTFILE2 from DIST.FILE.

Examining "PARTFILE4".

Examining "PARTFILE3".
Warning: multiple occurrences of part number 3.
Removing PARTFILE3 from DIST.FILE.

Updating Distributed File "DIST.FILE".
>DEFINE.DF DIST.FILE ADDING PARTFILE1 1 PARTFILE2 2 PARTFILE3 3
Compiling "@PART.ALGORITHM".
IF INDEX ( @ID , - , 1 ) THEN FIELD ( @ID , - , 1 ) ELSE ERROR
Part file "PARTFILE1", Path "/usr/SALES/PARTFILE1", Part number 1 Added.

Part file "PARTFILE2", Path "/usr/SALES/PARTFILE2", Part number 2 Added.

Part file "PARTFILE1", Path "/usr/SALES/PARTFILE3", Part number 3 Added.

>
```

Use RECORD to verify whether a record already exists in a file. RECORD displays the group the record ID hashed to and indicates whether the record was found in the file.

Syntax

RECORD [[**DICT**] *filename* [*record*]]

Qualifiers

DICT	Specifies the file dictionary.
filename	The name of the file.
record	The record you want to verify.

Description

If you omit a qualifier, RECORD prompts for it.

Example

```
>RECORD PAYABLES 11145
Record "11145" hashes to group 1 but was not found.
>RECORD
File Name = ORDERS
Record ID = 12223
Record "12223" hashes to group 4 but was not found.
>
```

RECOVERY.CHECKPOINT

Use RECOVERY.CHECKPOINT to find the number of the first log file you need for a roll-forward recovery. You must be a UniVerse Administrator logged in to the UV account to use RECOVERY.CHECKPOINT.

Syntax

RECOVERY.CHECKPOINT { *listname* | **ALL** }

Qualifiers

listname The name of a saved select list containing full pathnames of all currently activated recoverable UniVerse files that require roll-forward recovery.

ALL Specifies that all recoverable files listed as currently activated in the UV.TRANS file are checked.

Description

RECOVERY.CHECKPOINT searches all selected UniVerse files for the file containing the earliest log file checkpoint. You should roll forward this log file first. RECOVERY.CHECKPOINT also reports the last log file checkpointed. You can then determine how many log files to restore in view of the disk space available.

RECOVERY.CHECKPOINT also lists the names of any files that are flagged as inconsistent.

Example

This example searches all recoverable files listed as currently active in the UV.TRANS file, and returns the numbers of the lowest and highest checkpoint IDs in the specified files:

```
>RECOVERY.CHECKPOINT ALL
Low Checkpoint mark is 0
High Checkpoint mark is 4294967295
```

Use RECOVERY.CONSISTENT to clear the flag that indicates a file is in an inconsistent state. You must be a UniVerse Administrator logged in to the UV account to use RECOVERY.CONSISTENT.

Syntax

RECOVERY.CONSISTENT *pathname*

Qualifier

pathname The full pathname of a recoverable UniVerse file flagged as inconsistent. To determine which files are flagged as inconsistent, use the RECOVERY.CHECKPOINT command.

Example

This example clears the ORDERS file's inconsistency flag:

```
>RECOVERY.CONSISTENT /usr/accounts/ORDERS
```

REFORMAT

Use REFORMAT to create an inverted file. You can direct the output of the REFORMAT command to another file or to magnetic tape.

Syntax

REFORMAT [**DICT** | **USING** [**DICT**] *dictname*] *filename* [*records* | **FROM** *n*] [*selection*] [*output.limiter*] [*sort*] *output* [*modifiers*] [**MTU** *mtu*] [**BLK** *size*] [*labelopt*]

Qualifiers

DICT
: Reformats records in the file dictionary of *filename*. If you do not specify DICT, records in the data file are reformatted.

USING [DICT] *dictname*
: If DICT is not specified, uses *dictname* as the dictionary of *filename*. If DICT is specified, the dictionary of *dictname* is used as the dictionary of *filename*.

filename
: The file whose records you want to reformat. You can specify *filename* anywhere in the sentence. REFORMAT uses the first word in the sentence that has a file descriptor in the VOC file as the filename.

records
: Specifies the records to reformat. You can specify as many record IDs as you want, separated by spaces. Enclose record IDs in single quotation marks to ensure that RetrieVe does not interpret them as field names or keywords.

FROM *n*
: Specifies the records whose record IDs are stored in select list *n*.

selection
: A selection expression specifying the conditions that data in a record must meet for the record to be selected. A selection expression begins with the keyword WITH. For syntax details, see the WITH keyword in Chapter 2.

output.limiter
: An expression specifying the conditions that values in multivalued fields must meet for those values to be output. An output-limiting expression begins with the keyword WHEN. For syntax details, see the WHEN keyword in Chapter 2.

sort A sort expression that specifies the type of sort and the field to sort on. The syntax is as follows:

BY *field*	Sort on *field* in ascending order.
BY.DSND *field*	Sort on *field* in descending order.
BY.EXP *field*	Explode multivalues in *field* and sort in ascending order.
BY.EXP.DSND *field*	Explode multivalues in *field* and sort in descending order.

You can use REFORMAT with the BY.EXP and BY.EXP.DSND keywords to reformat data in multivalued fields into single-valued fields by using an exploded sort. For more information on the sort expression keywords, see Chapter 2.

output Specifies the fields whose data you want to include. You must specify at least one field. The fields must be defined in the file dictionary. If you are listing dictionary records, the fields must be defined in the DICT.DICT file.

You can precede a field name with the CALC field modifier. You cannot follow a field name with field qualifiers.

modifiers One or more of the following keywords:

FIRST	ID.SUP	SAMPLE
ID.ONLY	ONLY	SAMPLED

These keywords modify the report format. For information about them and their synonyms, see Chapter 2.

MTU *mtu* Specifies a drive other than 0. *mtu* indicates the mode (*m*), number of tracks (*t*), and tape unit number (*u*) of a tape drive. You can use the default for these values, 000, which indicates ASCII mode, 9-track tape, and unit number 0, otherwise REFORMAT ignores the track specification. See the MTU keyword in Chapter 2.

BLK *size* Specifies the block size if it is different from the default of 8192 bytes.

labelopt One of the following:

PICK.FORMAT (for Pick tape format)

INFORMATION.FORMAT (for Prime INFORMATION tape format)

REALITY.FORMAT (for REALITY tape format)

REFORMAT

Description

After you enter a REFORMAT command, the following prompt appears:

```
File Name =
```

Enter a valid UniVerse filename as a destination file, or enter the keyword TAPE (or BDE in IN2 flavor accounts). REFORMAT directs output of the command either to the file or to magnetic tape, respectively. If you direct the output to another file, you must specify a filename other than the source filename. If you press **Return** at the `File Name =` prompt, no processing occurs.

When you send output to another file, REFORMAT uses the first field defined by the output specification as the record ID in the new file. The other output fields become fields in the new file. The order of fields in the output specification of the REFORMAT command determines the order of fields in the new file. The new file must already exist, and you must create new dictionary fields manually if you need them.

When you send output to magnetic tape, REFORMAT writes one tape record for each reformatted record. Use the T.ATT command or the BLK keyword to specify tape record size. The default tape record size is 8192 bytes. The new record ID and the fields for the data record are concatenated, ending with a segment mark. They are either padded or truncated, depending on the size of the tape record. You can use MTU, BLK, and *labelopt* when directing output to tape.

REFORMAT ignores control breaks and totals.

Use RELEASE to unlock records locked by MATREADL, MATREADU, READL, READU, READVL, and READVU BASIC statements. You must use RELEASE from the same terminal you were using when the MATREADL, MATREADU, READL, READU, READVL, and READVU statements locked the records.

Syntax

RELEASE [*filename*] [*record*]

Qualifiers

filename The name of the file from which to release the locks.

record The record ID that you want to release the locks from.

Description

You should not need to use RELEASE unless an unusual event occurs that prevents the BASIC program from releasing records locked by MATREADL, MATREADU, READL, READU, READVL, and READVU statements.

To release all the locks that you have set, enter **RELEASE**.

To release all the locks that you have set for a specific file, enter **RELEASE** ***filename***.

To release a lock you have set for a specific record in a specific file, enter **RELEASE** ***filename record***.

You can examine a list of the records that have been locked using LIST.READU.

RELEASE.LFILE

Use RELEASE.LFILE to release a transaction logging log file for reuse. You must be a UniVerse Administrator logged in to the UV account to use RELEASE.LFILE.

Syntax

RELEASE.LFILE *logfile*

Qualifier

logfile The number of the log file you want to release for reuse. The log file's status must be Full.

Description

RELEASE.LFILE makes a full log file available for reuse. Once you release a log file, its logged updates are lost; if you still need them, you should back up the log file to tape before releasing them.

Note: You cannot use RELEASE.LFILE to release the tape log file.

Executing RELEASE.LFILE for *logfile* releases files of the form logdir/*lg*nnn, where *logdir* is the pathname of the current log directory and *nnn* is a log file number.

RELEASE.LFILE reflects the changed state of the log files it releases by updating the records corresponding to these log files in the UV_LOGS file. RELEASE.LFILE must therefore have access to UV_LOGS. The STATUS field of these corresponding records in UV_LOGS are updated by RELEASE.LFILE. The status of the released log files changes from Full to Released, and new Available log files are created to replace the Released log files, which no longer exist physically on disk.

If the state of transaction logging is full, executing RELEASE.LFILE after a Full log file has been backed up to tape does not change the system-wide state of transaction logging. After releasing Full log files, use ENABLE.RECOVERY or the **Enable logging** option on the Manage Logging Activity menu to start up the log daemon.

If RELEASE.LFILE cannot release a specified log file, execution stops with an error.

Example

This example releases log file 351 for reuse:

```
>RELEASE.LFILE 351
```

REMOVE.DEMO.FILES

Use REMOVE.DEMO.FILES to delete the 10 sample files for the Circus database from the account you are logged in to.

Syntax

REMOVE.DEMO.FILES

Description

REMOVE.DEMO.FILES removes the UniVerse data files, and the associated file dictionaries that were created by the MAKE.DEMO.FILES command.

REMOVE.DEMO.TABLES

Use REMOVE.DEMO.TABLES to delete the 10 sample tables for the Circus database from the account you are logged in to. You must be the owner of the tables or have DBA privilege to use REMOVE.DEMO.TABLES.

Syntax

REMOVE.DEMO.TABLES

Description

REMOVE.DEMO.TABLES removes the tables that were created by the MAKE.DEMO.TABLES command.

Use REPEAT in a loop. See the LOOP command for information about REPEAT.

RESIZE

Use RESIZE to reorganize a file with a new file type, modulo, and separation, or to change an existing nondynamic file to a dynamic file. You cannot use RESIZE to change the parameters of a dynamic file, or to resize an SQL table to type 1, 19, or 25 file.

Syntax

RESIZE [**DICT**] [*filename*] [*type*] [*modulo*] [*separation*]
[**CONCURRENT** | **INPLACE** | **USING** *partition*]

RESIZE [**DICT**] [*filename*] [**30** | **DYNAMIC**] [*parameter* [*value*] ...]
[**USING** *partition*]

Qualifiers

DICT	Resizes the file dictionary.
filename	The name of the file to be resized.
type	The new file type, a number (1 through 19, or 25) specifying one of the nondynamic file types.
modulo	The new modulo, an integer from 1 through 8,388,608 defining the number of groups in the file. *modulo* is ignored if you specify a nonhashed or dynamic file type.
separation	The new separation, an integer from 1 through 8,388,608 specifying the group buffer size in 512-byte blocks. *separation* is ignored if you specify a nonhashed or dynamic file type.
CONCURRENT	Specifies that other users can use the file while it is being resized. This option does not exist when resizing to a type 30 file. This option is not supported on Windows NT.
INPLACE	Resizes the file in its present physical location. This option does not exist when resizing to a type 30 file.

USING *partition* Specifies the pathname of the work area that RESIZE will use for creating the necessary temporary files. For example, the following command changes SUN.MEMBER to a dynamic file, and creates the temporary files it needs in the partition */u4*:

```
>RESIZE SUN.MEMBER DYNAMIC USING /u4
```

RESIZE moves the files back into the correct directory after resizing the SUN.MEMBER file and deleting the original SUN.MEMBER file.

30 Makes the file a dynamic file.

DYNAMIC Makes the file a dynamic file.

Specify the following parameters only for dynamic files:

GENERAL Specifies the general hashing algorithm for a dynamic file. GENERAL is the default.

SEQ.NUM Specifies a hashing algorithm suitable for sequential numbers for a dynamic file. Use this hashing algorithm only for records with IDs that are mainly numeric, sequential, and consecutive.

GROUP.SIZE {1|2} Specifies the size of each group in the file, either 1 or 2. 1 specifies a group size of 2048 bytes, which is equivalent to a separation of 4. 2 specifies a group size of 4096 bytes, which is equivalent to a separation of 8. A group size of 2048 (GROUP.SIZE 1) is the default.

MINIMUM.MODULUS *n*
Specifies the minimum modulo of the file, an integer value greater than 1. This value is also the initial value of the modulo of the dynamic file. A minimum modulo of 1 is the default.

SPLIT.LOAD *n*	Specifies the level at which the file's modulo is increased by 1. SPLIT.LOAD takes a numeric argument indicating the percentage of space allocated for the file. When the data in the file exceeds the specified percentage of the space allocated for the file, the data in one of the groups is divided equally between itself and a new group, to increase the modulo by 1. The default SPLIT.LOAD is 80%.
MERGE.LOAD *n*	Specifies the level at which the file's modulo is decreased by 1. MERGE.LOAD takes a numeric argument indicating the percentage of space allocated for the file. When the data in the file is less than the specified percentage of the space allocated for the file, the data in the last group of the file is merged with another group, to decrease the modulo by 1. The default MERGE.LOAD is 50%.
LARGE.RECORD *n*	Specifies the size of a record considered too large to be included in the primary group buffer, specified as an integer or a percentage. Specified as an integer, the value is the number of bytes a record must contain to be considered a large record. Specified as a percentage, the value is a percentage of the group size. When the size of a record exceeds the specified value, the data for the record is put in an overflow buffer, but the record ID is put in the primary buffer. This method of large record storage increases access speed. The default LARGE.RECORD size is 80%.
RECORD.SIZE *n*	Calculates the values for group size and large record size based on the value of the estimated average record size specified. The value is your estimate of the average record size for the dynamic file, specified in bytes. RECORD.SIZE does not limit the size of records. If you specify a value for group size (GROUP.SIZE) or for large record size (LARGE.RECORD), those values override the value calculated by RECORD.SIZE.

MINIMIZE.SPACE Calculates the best amount of space required by the file (at the expense of access time), using the values for the split load, merge load, and large record size. If you specify values for split load, merge load, or large record size, those values override the value calculated by MINIMIZE.SPACE. If you specify MINIMIZE.SPACE and RECORD.SIZE, the value for large record size calculated by MINIMIZE.SPACE is used above the value calculated by RECORD.SIZE.

Description

As you add records to a file, your original estimate of the file type, modulo, and separation may no longer be correct. You can use commands such as HASH.HELP, HASH.HELP.DETAIL, HASH.TEST, and HASH.TEST.DETAIL to test a file type, modulo, and separation, without actually changing the file structure. As a file grows, it may be necessary to change the modulo, separation, and file type to maintain the most efficient file structure.

Dynamic files make file management easier for users. The default parameters are correct for most dynamic files. You can increase the efficiency of some files by setting parameters different from the defaults. Use the ANALYZE.FILE command to verify that your settings are actually more efficient than the defaults.

Test several combinations of file type, modulo, and separation using HASH.TEST or HASH.TEST.DETAIL before using RESIZE.

To use RESIZE on a specific file, specify filename, file type, modulo, and separation qualifiers. To retain an existing file type, modulo, or separation, enter ***** as its value. If you are reorganizing a data file, do not include the keyword DICT.

You need not copy the file or reallocate records when you use RESIZE. RESIZE distributes all the records from the original file groups into new groups.

RESIZE normally copies records from one disk location to another. The CONCURRENT option lets other users access the file while it is being resized. If many users are accessing the file and many records are locked, performance will be notably slower.

The INPLACE option uses a space minimization algorithm and resizes the file in its current physical location. This is useful when the amount of available disk space is low and there is not enough room for large temporary files.

RESIZE changes the physical file structure and deletes any physical disk records that have become superfluous by the reorganization of a group.

REVISE

Use REVISE to add, change, and delete file records.

Syntax

REVISE [**DICT**] [*filename*] [*fields*] [**USING** *process*]
[*verifield* { **VERIFY** | **VERIFILE** } *verifile* [**VERIFIELD** *display.field*]]

Qualifiers

DICT — Specifies that you want to revise the file dictionary.

filename — The name of the file to revise.

fields — The names of fields to revise. If you do not specify a field, ReVise uses the fields defined in the @REVISE phrase in the file dictionary. If there is no @REVISE phrase, ReVise uses the fields defined in the @ phrase in the file dictionary. If the dictionary contains neither an @REVISE phrase nor an @ phrase, ReVise creates an @REVISE phrase containing all the data descriptor fields in the dictionary and uses these fields.

process — The name of a process definition for prompting. The process must exist in the file REVISE.PROCESSES. A process serves as a template that ReVise uses to prompt for entries. You can enter any one of the following processes:

ENTER.DICT	Creates an entry in a file dictionary.
ENTER.PDICT	Creates an entry in a Pick-style file dictionary.
ENTER.DICTAS	Creates A-type and S-type entries in a UniVerse file dictionary.
ENTER.MENUS	Creates a menu in a menu file.
ENTER.FMENUS	Creates a formatted menu in a menu file.
ENTER.S	Creates a stored sentence in the VOC file.
ENTER.SELECTOR	Creates a menu selector record in the VOC file.

VERIFY — (or VERIFILE) Verifies that data you enter exists as a record ID in a verification file.

verifield Either the name of a field in the current file whose data is being validated or the name of the record ID field (@ID) in the current file.

- *field* If you use a field name, ReVise verifies that the value entered in *verifield* is also a record ID in *verifile*.
- *record.ID* If you use the record ID field name, ReVise verifies that the entered value is *not* a record ID in *verifile*. This does not work, however, if the ReVise sentence also includes a VERIFIELD expression. In such a case, *record.ID* must be a record ID in *verifile*.

verifile The name of the verification file whose record IDs ReVise uses to validate the data entered in *verifield*.

VERIFIELD Displays the values in *verifile* that verify *verifield* data.

display.field The name of the field in *verifile* whose data ReVise displays for each value entered in *verifield*.

If you do not specify *filename* or the keyword USING, ReVise displays the following prompt:

```
Enter process name:
```

Enter one of the processes from the file REVISE.PROCESSES.

RUN

Use RUN to execute a compiled BASIC program.

Syntax

RUN [*filename*] *program* [*options*]

Qualifiers

filename The name of the file containing the source program. RUN appends .O to *filename*, then executes the specified program from this object file. If you do not specify *filename*, RUN assumes the BP file.

program The name of the record containing the source code of the program. You must specify *program*.

options can be any of the following:

NO.WARN	Suppresses all warning (nonfatal) error messages. If you do not specify NO.WARN, run-time error messages are printed on the screen as they are encountered.
NO.PAGE	Suppresses automatic paging. Programs that position the cursor with @ functions need not disable paging.
LPTR	Spools program output to the printer rather than to the terminal screen.
KEEP.COMMON	Retains the value of variables in unnamed common if a CHAIN statement passes program execution to another BASIC program.
TRAP	Enters the RAID debugger instead of displaying warning (nonfatal) error messages.

Description

If you do not use NO.PAGE, UniVerse counts the lines printed by the PRINT statement and displays the following message at the bottom of each full page:

```
Press any key to continue...
```

Some programs use the cursor position function, @. These programs do not need the NO.PAGE option. UniVerse counts the lines printed by PRINT statements only for programs without any cursor control.

Use SAVE.LIST to save an active select list. You can use GET.LIST to recall this list for subsequent processing and avoid having to repeat the selection process each time you want to use the same select list.

Syntax

SAVE.LIST [[*filename*] *listname*] [**FROM** *n*]

Qualifiers

filename The name of an existing type 1 or type 19 file. The default file is &SAVEDLISTS&.

listname The name you are giving to the list. If you do not give the list a name, SAVE.LIST assigns the name &TEMP*port#*&. The *port#* is your terminal number.

FROM *n* Specifies select list *n*. If you do not specify a FROM clause, select list 0 is saved.

Description

To save select list 0, you must use SAVE.LIST immediately after you have created the list.

SAVE.LIST stores the list as a record in a type 1 or type 19 file.

If no select list is active, SAVE.LIST deletes a saved list in the &SAVEDLISTS& file with the same name as *listname*. For more information, see &SAVEDLISTS&.

Example

```
>SELECT SUN.MEMBER WITH YR.JOIN > 1980

9 record(s) selected to SELECT list #0.
>>SAVE.LIST YR.80

9 record(s) SAVEd to SELECT list "YR.80".
```

SAVE.STACK

Use SAVE.STACK to save the current sentence stack in the &SAVEDLISTS& file, under a specified name.

Syntax

SAVE.STACK [*listname*]

Qualifier

listname The name of the saved sentence stack.

Description

If you do not specify *listname*, SAVE.STACK prompts you for one.

Example

```
>SAVE.STACK
Name to save command stack as: MGR.STACK
Command stack "MGR.STACK" saved in file "&SAVEDLISTS&".
>
```

Use SEARCH to create a select list of records that contain an occurrence of a specified string. This command is the same as a SELECT command with a WITH or WHEN *field* MATCHING clause except that SEARCH checks every field of each record for a match and is quicker than using the MATCHING operator.

Syntax

SEARCH [**DICT** | **USING** [**DICT**] *dictname*] *filename* [*records* | **FROM** *n*] [*selection*] [*output.limiter*] [*sort*] [**TO** *n*] [*options*]

Qualifiers

DICT
: Searches records in the file dictionary of *filename*. If you do not specify DICT, records in the data file are searched.

USING [DICT] *dictname*
: If DICT is not specified, uses *dictname* as the dictionary of *filename*. If DICT is specified, the dictionary of *dictname* is used as the dictionary of *filename*.

filename
: The file whose records you want searched. You can specify *filename* anywhere in the sentence. SEARCH uses the first word in the sentence that has a file descriptor in the VOC file as the filename.

records
: Specifies the records to include in the select list. You can specify as many record IDs as you want, separated by spaces. Enclose record IDs in single quotation marks to ensure that RetrieVe does not interpret them as field names or keywords.

FROM *n*
: Specifies the records whose record IDs are stored in select list *n*.

selection
: A selection expression specifying the conditions that data in a record must meet for the record to be selected. A selection expression begins with the keyword WITH. For syntax details, see the WITH keyword in Chapter 2.

output.limiter
: An expression specifying the conditions that values in multivalued fields must meet for those values to be output. An output-limiting expression begins with the keyword WHEN. For syntax details, see the WHEN keyword in Chapter 2.

sort A sort expression that specifies the type of sort and the field to sort on. The syntax is as follows:

BY *field*	Sort on *field* in ascending order.
BY.DSND *field*	Sort on *field* in descending order.
BY.EXP *field*	Explode multivalues in *field* and sort in ascending order.
BY.EXP.DSND *field*	Explode multivalues in *field* and sort in descending order.

For more information, see Chapter 2.

TO *n* The number to assign to the list, 0 through 10. If you do not specify a number, SEARCH creates select list 0.

options One or more of the following:

ALL.MATCH	Selects only records containing all of the specified strings.
NO.MATCH	Selects only records not containing any of the specified strings.
NO.SELECT	Lists record IDs instead of creating a select list.
EXPLODE	Makes each multivalue that matches a specified string an element in the select list. The select list elements also include the field and value number in which the string was found. When you use EXPLODE, SEARCH creates the list elements according to the following format:

*record.id*v*value*s*field*v0

The *record.id* is the record ID where the string is found, *value* and *field* are the value and field numbers within the record that it is found in, v represents a value mark, and s represents a subvalue mark.

SQUAWK	Lists a message for each record selected.

Description

After you enter **SEARCH**, the following prompt appears:

```
STRING:
```

You can enter as many separate strings as you want. Press **Return** at the prompt to terminate input. SEARCH selects only records containing any of the values you entered for string.

ESEARCH is a synonym for the SEARCH command.

SELECT

Use SELECT to create a list of records that meet specified criteria. You can then use this list with other commands in the UniVerse system. Because the list contains the data or record IDs from selected records, it is called a select list.

Syntax

SELECT [**DICT** | **USING** [**DICT**] *dictname*] *filename* [*records* | **FROM** *n*] [*selection*] [*output.limiter*] [*sort*] [**SAVING** [**UNIQUE**] *field* [**NO.NULLS**]] [**TO** *n*] [*report.qualifiers*]

Qualifiers

DICT
: Selects records in the file dictionary of *filename*. If you do not specify DICT, records in the data file are selected.

USING [DICT] *dictname*
: If DICT is not specified, uses *dictname* as the dictionary of *filename*. If DICT is specified, the dictionary of *dictname* is used as the dictionary of *filename*.

filename
: The file whose records you want to select. You can specify *filename* anywhere in the sentence. SELECT uses the first word in the sentence that has a file descriptor in the VOC file as the filename.

records
: Specifies the records to include in the list. You can specify as many record IDs as you want, separated by spaces. Enclose record IDs in single quotation marks to ensure that RetrieVe does not interpret them as field names or keywords.

FROM *n*
: Specifies the records whose record IDs are stored in select list *n*.

selection
: A selection expression specifying the conditions that data in a record must meet for the record to be selected. A selection expression begins with the keyword WITH. For syntax details, see the WITH keyword in Chapter 2.

output.limiter
: An expression specifying the conditions that values in multivalued fields must meet for those values to be output. An output-limiting expression begins with the keyword WHEN. For syntax details, see the WHEN keyword in Chapter 2.

sort A sort expression that specifies the type of sort and the field to sort on. The syntax is as follows:

BY *field*	Sort on *field* in ascending order.
BY.DSND *field*	Sort on *field* in descending order.
BY.EXP *field*	Explode multivalues in *field* and sort in ascending order.
BY.EXP.DSND *field*	Explode multivalues in *field* and sort in descending order.

For more information, see Chapter 2.

SAVING Specifies that the list be made up of field values instead of record IDs. Do not use a SAVING clause on multivalued fields.

UNIQUE Omits duplicates of the saved field from the select list.

field The name of a field whose values you want to constitute the select list.

NO.NULLS Omits empty string values in the saved field from the select list.

TO *n* The number to assign to the list, 0 through 10. If you do not specify a number, SELECT creates select list 0.

report.qualifiers

One or more of the following keywords:

FIRST LPTR SAMPLE SAMPLED

These keywords modify the report format. For information about them, see Chapter 2.

SEMAPHORE.STATUS

Use SEMAPHORE.STATUS to display the status of system semaphores. You can execute SEMAPHORE.STATUS only from the UV account.

Syntax

SEMAPHORE.STATUS

Description

SEMAPHORE.STATUS is not available on all systems. It is designed only for systems whose semaphores are implemented in assembly language.

SEMAPHORE.STATUS lists information for each numbered semaphore, and for the login, port status, type 30 file and transaction logging semaphores. The SEMAPHORE.STATUS report displays this information under these column headings:

State	Nonzero for locked, zero for unlocked.
Netnode	Identifies the host from which the lock originated. Zero indicates a lock on the local machine. The network node number is the last part of the TCP/IP host number specified in the */etc/hosts* file.
Owner	The user ID of the user who locked the semaphore.
Collisions	The number of times two processes collide when trying to set a lock.
Retrys	The number of times processes repeatedly try to set a lock.

Example

The following is an example of a SEMAPHORE.STATUS report:

```
>SEMAPHORE.STATUS

File access     State Netnode Owner Collisions Retrys
Semaphore #   1     0       0     0          0      0
Semaphore #   2     0       5     0          0      0
Semaphore #   3     0       0     0          0      0
Semaphore #   4     0       0     0          0      0
Semaphore #   5     0       0     0          0      0
Semaphore #   6     0       0     0          0      0
Semaphore #   7     0       0     0          0      0
    .
    .
    .
```

```
Group access    State Netnode Owner Collisions Retrys
Semaphore #   1     0       0     0          4     10
Semaphore #   2     0       0     0          6      6
Semaphore #   3     0       0     0        210    330
Semaphore #   4     0       0     0         10     13
Semaphore #   5     0       0     0          7      7
Semaphore #   6     0       0     0          4     10
    .
    .
    .

Login           State Netnode Owner Collisions Retrys
Semaphore #   1     0       0     0          0      0

Port status     State Netnode Owner Collisions Retrys
Semaphore #   1     0       0     0          0      0

Type 30 file    State Netnode Owner Collisions Retrys
Semaphore #   1     0       0     0          0      0

Transaction log State Netnode Owner Collisions Retrys
Semaphore #   1     0       0     0          0      0
```

SET.FILE

Use SET.FILE to create a Q-pointer in the VOC file. Q-pointers are file definition synonyms that point to files in local and remote UniVerse accounts.

Syntax

SET.FILE [*account*] [*filename*] [*pointer*]

Qualifiers

account The name of the account containing the remote file, as defined in the UV.ACCOUNT file; the pathname where an account resides; or the name of a login account.

filename The name of a file in *account*.

pointer The record ID of the Q-pointer in your VOC file.

Description

If you do not specify qualifiers, SET.FILE prompts for them.

Use SET.INDEX to change the characteristics of all the secondary indices in a file.

Syntax

SET.INDEX [**DICT**] *filename* [**TO** [*pathname* | **NULL**]] [*options*]

Qualifiers

DICT Specifies the file dictionary.

filename The name of a UniVerse file in which to change the characteristics of the secondary indices. If a select list for *filename* is active, you do not need to specify *filename*.

pathname The full pathname for the directory of the secondary indices in *filename* to be changed in the file header.

NULL Removes the current *pathname* for the indices in *filename* from the file header.

options can be any of the following:

FORCE Specifies that settings should be changed to *pathname* or NULL without prompting. If you do not specify FORCE, SET.INDEX verifies that you want to change or remove the pathname.

INFORM Displays the current *pathname* for the indices in *filename* in the file header on the terminal. You cannot use INFORM with another option.

OFF Disables automatic secondary index updates for *filename*. Same as DISABLE.INDEX.

ON Enables automatic secondary index updates for *filename*. Same as ENABLE.INDEX.

Description

You can use SET.INDEX on any UniVerse file for which you have write permissions. If you move or copy a file at the operating system level, SET.INDEX lets you easily change the file header information to point to the new location for the secondary indices.

Examples

This example displays the current pathname for the indices in the INVENTORY file on the terminal:

```
>SET.INDEX INVENTORY INFORM
Indices for file 'INVENTORY' reside in '/u1/uv/I_INVENTORY'.
```

The following sequence removes the pathname information for the indices in the INVENTORY file from the file header. The INFORM option displays the change.

```
>SET.INDEX INVENTORY TO NULL

The current indices for file 'INVENTORY' are at path:

/u1/uv/I_INVENTORY

Do you wish to remove this path (Y/N)? Y
File header block updated.

>SET.INDEX INVENTORY INFORM

File INVENTORY has no secondary indices.
```

The following example uses the FORCE keyword to remove the pathname information without prompting:

```
>SET.INDEX INVENTORY TO NULL FORCE
File header block updated.
```

The next example changes the pathname of the indices for the INVENTORY file in the file header and verifies that you want to make the change:

```
>SET.INDEX INVENTORY TO /u1/uv/I_INVENTORY

The current indices for file 'INVENTORY' are at path
   No indices path currently defined.
to be changed to path
   /u1/uv/I_INVENTORY

Do you wish to make this change (Y/N)? Y
File header block updated.
```

The following sequence enables automatic updating of the indices of the INVENTORY file. The LIST.INDEX command displays the update mode of the indices.

```
>SET.INDEX INVENTORY ON
Automatic secondary index updates for file INVENTORY have been enabled.
>LIST.INDEX INVENTORY ALL
Alternate Key Index Summary for file INVENTORY
```

```
File........... INVENTORY
Indices........ 1 (0 A-type, 0 C-type, 1 D-type, 0 I-type, 0 S-type)
Index Updates.. Enabled, No updates pending

Index name      Type  Build    Nulls  In DICT  S/M  Just Unique Field
num/I-type
F1               D    Required  Yes    No       S    L     N    1
```

SET.LOG.ATTR

Use SET.LOG.ATTR to set or change the transaction logging operating mode. You must be a UniVerse Administrator logged in to the UV account to use SET.LOG.ATTR.

Syntax

SET.LOG.ATTR { **CHECKPOINT** | **ARCHIVE** } { **ON** | **OFF** }
[**DEVICELIST** *devices*]

Qualifiers

CHECKPOINT Changes checkpoint mode. You must set checkpoint mode to ON to enable warmstart transaction logging and recovery.

ARCHIVE Changes archive mode. Archive mode corresponds to Release 7 transaction logging. Use archive mode for recovery from media failure.

devices Specifies a list of tape devices, separated by spaces. Each device must be defined in the &DEVICE& file. Transaction updates are logged to the tape devices in the order in which you specify them.

ARCHIVE must be set to ON, otherwise the DEVICELIST clause is ignored. When you specify *devices*, CHECKPOINT mode is automatically set to OFF.

Description

The transaction logging system can run in checkpoint, archive mode, or both. You can change the mode of transaction logging only when its state is inactive, uninitialized, suspended, or disabled.

Examples

This example sets both transaction logging modes to ON. File updates are logged to the log file on disk:

```
>SET.LOG.ATTR CHECKPOINT ON
Checkpoint mode has been set to ON.
>SET.LOG.ATTR ARCHIVE ON
Archive mode has been set to ON.
```

The next example sets archive mode to ON and defines MT0 and MT1 as tape devices. File updates are logged directly to tape, starting with device MT0.

```
>SET.LOG.ATTR ARCHIVE ON DEVICELIST MT0 MT1
Checkpoint mode has been set to OFF.
Archive mode has been set to ON with logging to tape device(s):
   1) MT0
   2) MT1
```

SET.REMOTE.ID

Use SET.REMOTE.ID to define the user name and password to use for access to files on a remote UniVerse system. SET.REMOTE.ID also sets a user's SQL user name on the remote system.

Syntax

SET.REMOTE.ID [*domain*] *username* {*password* | **PROMPT**} **ON** *nodename* [[**GROUP**] *groupname*]

Qualifiers

domain **Windows NT.** The domain name. When connecting to Windows NT systems, you can precede the user name with the domain name. If you do not specify a domain name, the domain name defaults to that of the local system.

username The user name to use for access to files on *nodename*. This must be a valid user name on the remote system.

Windows NT. When you are connecting to a Windows NT system, *username* is not case-sensitive.

password The password associated with *username* to use for access to files on *nodename*. *password* is always case-sensitive.

PROMPT Prompts the user to enter a valid password. The password is not echoed to the screen.

ON Specifies the name of a remote system running UniVerse. The remote system must be defined on the local system.

GROUP Limits *username*'s group membership on a remote UNIX system to *groupname*. *groupname* must be a valid group on the UNIX system, and *username* must be a member of the group.

Description

Use SET.REMOTE.ID before entering any command that accesses a remote file. If you are connecting a local UNIX or Windows NT system to a remote Windows NT system via TCP/IP, you must use SET.REMOTE.ID to specify a user name and password.

Once you are connected to a remote system, you cannot use SET.REMOTE.ID to change the remote user name, password, or group name.

If *username*, *password*, *nodename*, or *groupname* does not match the appropriate definitions on the remote or local system, all access to files on the remote system are denied.

If you do not specify *groupname*, the user belongs to all groups to which *username* is assigned.

You can include one or more SET.REMOTE.ID commands in a LOGIN paragraph if you want to access remote systems during every UniVerse session. You can also use the UVNETRID environment variable to permanently set effective user names. See *UV/Net II Guide* for more information.

Example

This example sets the user name of the current user to *susan* on the remote machine called *sales*:

```
>SET.REMOTE.ID susan xyz4569a ON sales
```

SET.TERM.TYPE

Use SET.TERM.TYPE to specify your terminal type. When you set your terminal type, UniVerse sets terminal characteristics appropriate for the terminal you are using.

Syntax

SET.TERM.TYPE [*code*] [*options*]

Qualifiers

code The code for the type of terminal. It is case-sensitive.

options One or more of the following:

AUTONL	Generates a new line sequence if a line longer than the width of the screen is typed.
FUNDAMENTAL	Loads the default key bindings.
HUSH	Suppresses terminal output.
LENGTH *n*	Sets the length of the terminal screen to *n* lines.
NEEDNL	Lets UniVerse generate new line sequences.
VERIFY.SUP	Specifies no prompting is required if an invalid terminal type is entered.
WIDTH *n*	Sets the width of the terminal screen to *n* characters.

Description

If you enter **SET.TERM.TYPE** without a code, UniVerse prompts for the code. Enter **?** at the prompt to list supported codes.

The terminal code is the name of the file in the *terminfo* directory that contains the terminal definition.

Use SETFILE to create a file pointer entry in the VOC file. A file pointer entry is a synonym for a file in your own or in another account. SETFILE creates a record in the VOC file that points to a UniVerse file that already exists.

Syntax

SETFILE [*pathname*] [*filename*] [**OVERWRITING**]

Qualifiers

pathname The full pathname of the data file for which you are creating an entry.

filename The name that you will use to access the file from this account.

OVERWRITING
Replaces an existing entry having the same name as *filename* with the new entry. Before using OVERWRITING, examine the VOC file and be sure it is okay to overwrite the VOC file. SETFILE does not verify what it is overwriting.

Example

```
>SETFILE

Enter DATA file pathname = /usr/a/ACCOUNTS
What do you want to call it in your VOC file = NEW.ACCT
Establishing file pointer:
Pathname      "/usr/a/ACCOUNTS"
VOC Name      "NEW.ACCT"
OK to establish pointer (Y/N) ?N
SETFILE aborted.
>
```

SETPTR (UNIX)

Use SETPTR to set the line printer spooler options for a logical print channel. These changes are effective until you use SETPTR again or use LOGOUT or QUIT.

Syntax

SETPTR [*channel* **,** *l.len* **,** *p.len* **,** *top* **,** *bottom* **,** *mode* **,** *options*]

Qualifiers

All arguments are positional parameters. Each parameter is optional, but its position must be held by a comma. If you enter **SETPTR** with no parameters, the current settings for logical print channel 0 are displayed.

channel Identifies the logical print channel assigned to the printer with the ASSIGN command. Enter a number from 0 through 255. The default is 0. If you specify *channel* with no options, SETPTR displays the current settings for that logical print channel.

l.len Sets the line length, that is, the paper width. The default is 132.

p.len Sets the number of lines per page. The default is 66.

top Sets the top margin in number of lines. The default is 3.

bottom Sets the bottom margin in number of lines. The default is 3.

mode A number from 1 through 5 that is used to direct output to one of the following places:

1 Line Printer Spooler Output (default).

2 Assigned Device. To send output to an assigned device, you must first assign the device to a logical print channel, using the ASSIGN command. The ASSIGN command does an automatic SETPTR command using the default parameters, except for mode, which it sets to 2. Use SETPTR only if you have to change the default parameters.

3 Hold File Output. Mode 3 directs all printer output to a file called &HOLD&. If a &HOLD& file does not exist in your account, SETPTR creates the file and its dictionary (D_&HOLD&). You must execute SETPTR with mode 3 before each report to create unique report names in &HOLD&. If a report exists with the same name, the new report overwrites it.

4 Synonym for mode 2.

5 Synonym for mode 2.

options can be any of the following:

AS [*name*]	Same as BANNER.
AT *name*	Routes output to system printer *name*.
BANNER [*name*]	In mode 1, *name* appears on the second line of the banner page under the account name, that is, the login name. In mode 3, specifies the record ID of the record in &HOLD& which stores the report. If you do not specify *name*, the record ID is P#0000. If you specify *name*, it is the record ID of the output record. In either case, each subsequent print job uses the same record ID and overwrites the previous job.
BANNER UNIQUE [*name*]	In mode 3, appends a sequential number to the name under which successive records are created in &HOLD&. If you do not specify *name*, the record ID is P#0000_*nnnnnn*, where *nnnnnn* is increased by each subsequent SETPTR command. If you specify *name*, the record ID is *name_nnnnnn*.
BANNER NEXT [*name*]	In mode 3, appends a sequential number to the name under which successive reports are created in &HOLD&. If you do not specify *name*, the record ID is P#0000_*nnnnnn*, where *nnnnnn* is increased for each new print job. If you specify *name*, the record ID is *name_nnnnnn*.
BRIEF	Suppresses the display of SETPTR settings.
COPIES *n*	Specifies the number of copies to print (with only one banner page).

DEFER *time*	Defers printing until *time*. Specify *time* in one of the following formats. The formats beginning with a plus sign (+) specify time relative to the current system time. *hh*:*mm* *dd.hh*:*mm* *mm.dd.hh*:*mm* *yy.mm.dd.hh*:*mm* *dd* *mm.dd* *yy.mm.dd* +*mm* +*hh*:*mm* +*dd.hh*:*mm*
EJECT	Ejects a page at the end of the print job.
ENDPAGE	Specifies the last page to print.
FMT	Specifies that the spooler controls pagination and formatting instead of the application.
FORM *name*	Uses the form *name* for printing this job. FORM prompts the user to put the named form in the printer.
FTN	Specifies that the print job contains FORTRAN control codes.
HOLD	In mode 1, sends print jobs to the spooler as hold files. The spooler does not print held jobs when they are sent. You can use the PRINT.ADMIN command to print held jobs. After a held job is printed, it is removed from the spool queue.
INFORM	In mode 1, displays the spooler job number of newly queued jobs.
KEEP	Keeps the print file open. This option lets you append subsequent reports to the same print file.
LNUM	Prints line numbers.
NFMT	Specifies that the application controls pagination and formatting instead of the spooler.

NHEAD	Suppress printing a banner.
NODEFAULT	Changes only those parameters specified with your command, and does not supply default settings for parameters not specified.
NOEJECT	Does not eject a page at the end of the print job.
NOFMT	Same as NFMT.
NOHEAD	Same as NHEAD.
NOHOLD	In mode 1, turns off the HOLD option.
NOKEEP	Closes an open print file.
NORETAIN	In mode 1, turns off the RETAIN option.
PRINTER *name*	Same as AT.
PRIORITY	Sets the print job's priority. The highest priority is 1 and the lowest is 255.
REQUEUE	Same as RETAIN.
RETAIN	In mode 1, sends jobs to the spooler as a retained hold file. The spooler does not print held jobs when they are sent. You can use the PRINT.ADMIN command to print held jobs. After a retained held job is printed, it remains in the spool queue.
STARTPAGE	Specifies the number of the page at which to begin printing.

Examples

```
>SETPTR 0,132,66,3,3,1
Unit Number   : 0
Page Width    : 132
Page Depth    : 66
Top Margin    : 3
Bottom Margin : 3
Print mode    : 1 - Spooled Output

Default spool banner  : "uniVerse"
OK to set parameters as displayed? Y
>SETPTR 1,21,12,3,3,1,BRIEF
```

SETPTR (Windows NT)

Use SETPTR to set the line printer spooler options for a logical print channel. These changes are effective until you use SETPTR again or use LOGOUT or QUIT.

Syntax

SETPTR [*channel* **,** *l.len* **,** *p.len* **,** *top* **,** *bottom* **,** *mode* **,** *options*]

Qualifiers

All arguments are positional parameters. Each parameter is optional, but its position must be held by a comma. If you enter **SETPTR** with no parameters, the current settings for logical print channel 0 are displayed.

channel Identifies the logical print channel assigned to the printer with the ASSIGN command. Enter a number from 0 through 255. The default is 0. If you specify *channel* with no options, SETPTR displays the current settings for that logical print channel.

l.len Sets the line length, that is, the paper width. The default is 132.

p.len Sets the number of lines per page. The default is 66.

top Sets the top margin in number of lines. The default is 3.

bottom Sets the bottom margin in number of lines. The default is 3.

mode A number from 1 through 5 that is used to direct output to one of the following places:

1 Line Printer Spooler Output (default).

2 Assigned Device. To send output to an assigned device, you must first assign the device to a logical print channel, using the ASSIGN command. The ASSIGN command does an automatic SETPTR command using the default parameters, except for mode, which it sets to 2. Use SETPTR only if you have to change the default parameters.

3 Hold File Output. Mode 3 directs all printer output to a file called &HOLD&. If an &HOLD& file does not exist in your account, SETPTR creates the file and its dictionary (D_&HOLD&). You must execute SETPTR with mode 3 before each report to create unique report names in &HOLD&. If a

report exists with the same name, the new report overwrites it.

4 Synonym for mode 2.

5 Synonym for mode 2.

options can be any of the following:

AS [*name*] Same as BANNER.

AT *name* Routes output to *name* of a printer on a Windows NT system.

BANNER [*name*] In mode 1, a banner page is not produced unless the Windows NT printer has been configured to do so. If you do not specify *name*, the Windows NT printer banner is produced. If you specify *name*, it appears on the second line of the banner page, after the user name. The banner name appears as the job name in the Windows NT Print Manager.

In mode 3, specifies the record ID of the record in &HOLD& which stores the report. If you do not specify *name*, the record ID is P#0000. If you specify *name*, it is the record ID of the output record. In either case, each subsequent print job uses the same record ID and overwrites the previous job.

BANNER UNIQUE [*name*]
In mode 3, appends a sequential number to the name under which successive records are created in &HOLD&. If you do not specify *name*, the record ID is P#0000_*nnnnnn*, where *nnnnnn* is increased by each subsequent SETPTR command. If you specify *name*, the record ID is *name*_*nnnnnn*.

BANNER NEXT [*name*]
In mode 3, appends a sequential number to the name under which successive reports are created in &HOLD&. If you do not specify *name*, the record ID is

	P#0000_*nnnnnn*, where *nnnnnn* is increased for each new print job. If you specify *name*, the record ID is *name_nnnnnn*.
BRIEF	Suppresses the display of SETPTR settings.
COPIES *n*	Specifies the number of copies to print (with only one banner page). In GDI mode, the number of copies is passed to the printer driver. In raw mode, this number is passed to Windows NT as a parameter for the print processor.
DEFER *time*	Defers printing until *time*. Specify *time* in one of the following formats. The formats beginning with a plus sign (+) specify time relative to the current system time. *hh*:*mm* *dd.hh*:*mm* *mm.dd.hh*:*mm* *yy.mm.dd.hh*:*mm* *dd* *mm.dd* *yy.mm.dd* +*mm* +*hh*:*mm* +*dd.hh*:*mm* Printing can be deferred only until later the same day for Windows NT systems.
EJECT	Ejects a page at the end of the print job.
ENDPAGE	Specifies the last page to print.
FMT	Specifies that the spooler controls pagination and formatting instead of the application.
FONTBOLD	Uses boldface print type for printers in GDI mode.
FONTITALIC	Uses italic print type for printers in GDI mode.
FONTNAME *fontname*	Specifies the font to be used for printing in GDI mode. If you do not specify *fontname*, the printer default font is used.

FONTSIZE *points*	Used in conjunction with the *fontname*. Specifies the size of font (in points) for GDI mode. If *points* is not specified, a default size of 10 points is used.
FORM *name*	Uses the form *name* for printing this job. *name* is used as the printer name, unless a printer has been explicitly specified. If a form name and a printer name are specified, the form name is passed to the Windows NT printer driver.
FTN	Specifies that the print job contains FORTRAN control codes.
GDI	Requests GDI printing mode for a Windows NT printer.
HOLD	In mode 1, pauses a print job. The paused print job can be resumed by using the SPOOL MODIFY or SP.EDIT command, or by resuming the job from the Windows NT Print Manager.
INFORM	In mode 1, displays the spooler job number of newly queued jobs.
KEEP	Keeps the print file open. You can append subsequent reports to the same print file.
LINESPACE *lines*	Specifies the line spacing in GDI mode. The line spacing is a real number giving the ratio between the desired line spacing and the default line spacing for the selected font. The default value is 1.0.
LNUM	Prints line numbers.
NFMT	Specifies that the application controls pagination and formatting instead of UniVerse.
NHEAD	Suppress printing a banner.
NODEFAULT	Changes only those parameters specified with your command, and does not supply default settings for parameters not specified. Default settings can be changed using the SETPTR.DEFAULT command.
NOEJECT	Does not eject a page at the end of the print job. This option is not supported for printers in GDI mode, and in raw mode it is available only for printers that support it.

NOFMT	Same as NFMT.
NOHEAD	Same as NHEAD.
NOHOLD	In mode 1, turns off the HOLD option.
NOKEEP	Closes an open print file.
NORETAIN	In mode 1, turns off the RETAIN option.
PRINTER *name*	Same as AT.
PRIORITY	Sets the print job's priority. The highest priority is 1 and the lowest is 255. The priority you enter is converted to a number within the range for Windows NT, which goes from 99 through 1. Because the range of priorities in UniVerse goes from 1 through 254, the mapping is not one to one. The following list shows the conversion of UniVerse priorities to Windows NT priorities:

Priority in UniVerse	Priority in Windows NT
1	99
2	98
.	.
.	.
.	.
10	90
11	89
12	89
13	89
14	88
15	88
16	88
17	87
.	.
.	.
.	.
244	11
245	10
246	9
247	8

.	.
.	.
.	.
254	1

RAW	Requests raw printing mode.
REQUEUE	Same as RETAIN.
RETAIN	In mode 1, same as HOLD.
STARTPAGE	Specifies the page number at which to begin printing.
TABSIZE	Specifies the spacing of tab stops in GDI mode. The default value is 8.

Examples

```
>SETPTR 0,132,66,3,3,1
Unit Number   : 0
Page Width    : 132
Page Depth    : 66
Top Margin    : 3
Bottom Margin : 3
Print mode    : 1 - Spooled Output

Default spool banner  : "uniVerse"
OK to set parameters as displayed? Y
>SETPTR 1,21,12,3,3,1,BRIEF
```

SETPTR.DEFAULT

Use SETPTR.DEFAULT to assign default SETPTR parameters over the entire system. You must be a UniVerse Administrator logged in to the UV account to use SETPTR.DEFAULT.

Syntax

SETPTR.DEFAULT

Description

SETPTR.DEFAULT uses the SETPTR settings of logical print channel 0 in the UV account to set system-wide default SETPTR parameters.

To specify system-wide defaults, first use a SETPTR 0 command to set the defaults you want to use, then use the SETPTR.DEFAULT command.

If you do not set parameters for logical print channel 0 before you use SETPTR.DEFAULT, SETPTR.DEFAULT sets system-wide defaults to the initial system defaults.

Example

In the following example, SETPTR sets parameters for logical print channel 0. It sets line length to 80, specifies form LW (laser writer), and suppresses the banner page and the end-of-job blank page. The SETPTR.DEFAULT command makes these parameters the system-wide defaults.

```
>SETPTR 0,80,,,,,FORM LW,NOHEAD,NOEJECT,BRIEF
>SETPTR.DEFAULT
>
```

SETUP.DEMO.SCHEMA

Use SETUP.DEMO.SCHEMA to convert the account you are logged in to into a UniVerse SQL schema called DEMO_*username*. You must have DBA privilege to convert an account into a schema.

Syntax

SETUP.DEMO.SCHEMA *username*

Qualifier

username The user name whose account you want to convert into a schema. This user is the owner of the new schema.

Description

This command lets the DBA set up an SQL schema for another user who wants to run MAKE.DEMO.TABLES. SETUP.DEMO.SCHEMA registers *username* as an SQL user (if not already).

SH

Use SH to invoke a UNIX Bourne shell (*sh*) from within UniVerse.

This command is not supported on Windows NT systems.

Syntax

SH [**–c** "*command*" | *script*]

Qualifiers

command The command text. It must be preceded by the flag *–c*. To avoid confusion, enclose *command* in quotation marks.

script The pathname of a UNIX shell script to execute. The shell script file does not need execute privileges.

Description

Once you invoke a Bourne shell, you can execute any UNIX command. You can also give SH an argument to execute a single command or a shell script without exiting UniVerse. To return to the UniVerse prompt, enter **`exit`** or press **Ctrl-D**.

See your UNIX documentation for a discussion of Bourne shell features.

Use the CSH command to execute UNIX C shell (*csh*) commands.

Example

This example invokes a Bourne shell and runs the UNIX command *ls* to list the contents of the current directory:

```
>SH -c"ls -lt"
total 707
drwxrwxrwx   2 susan   acctg          512 Jul 06 11:43 I_CREDITORS
-rw-rw-r--   1 susan   acctg         1536 Jul 06 11:43 CREDITORS
-rw-rw-r--   1 susan   acctg         2048 Jul 06 11:42 D_CREDITORS
-rw-r--r--   1 susan   acctg        49152 Jul 06 11:41 VOC
drwxrwxrwx   2 susan   acctg          512 Jul 02 16:55 I_ORDERS
-rw-r--r--   1 susan   acctg         3072 Jul 02 16:55 D_ORDERS
drwxrwxr-x   2 susan   acctg          512 Jul 02 16:43 LONG.OVERDUE
-rw-rw-r--   1 susan   acctg         4096 Jul 02 16:41 D_LONG.OVERDUE
-rw-rw-r--   1 susan   acctg         2048 Jul 02 16:40 D_OVERDUE
-rw-rw-r--   1 susan   acctg         1536 Jul 02 16:40 OVERDUE
drwxrwxrwx   2 susan   acctg          512 Jul 02 16:07 CUSTOMERS
-rw-r--r--   1 susan   acctg         3072 Jul 02 16:06 D_CUSTOMERS

>
```

Use SHUTDOWN.RECOVERY to disable the transaction logging system if it is enabled or suspended. You must be a UniVerse Administrator logged in to the UV account to use SHUTDOWN.RECOVERY.

Syntax

SHUTDOWN.RECOVERY

Description

Use SHUTDOWN.RECOVERY in extreme situations to disable the transaction logging system. For example, if your tape unit is unserviceable and all log files are full but processing must continue, SHUTDOWN.RECOVERY permits nontransactional updates to recoverable files without logging updates. You can reenable transaction logging with ENABLE.RECOVERY.

CAUTION: Because updates to recoverable files are not logged after you execute SHUTDOWN.RECOVERY, the point of disablement is the latest point to which you can consistently recover your UniVerse files.

If transaction logging is currently full or suspended, SHUTDOWN.RECOVERY starts the log daemon to disable logging properly. While transaction logging is in the disabled state, programs that request writes to the log file fail.

Example

This example disables transaction logging:

```
>SHUTDOWN.RECOVERY
Request to Shutdown Logging Subsystem made at 12:47:59 on 01 OCT 1996.
You can use the 'Display logging state' menu to verify the current state
of the logging subsystem.
```

SLEEP

Use SLEEP to suspend a process for a specific length of time or until a specific time of day. SLEEP is useful in a paragraph that is executed as a phantom process to specify the time to begin the process.

Syntax

SLEEP [*seconds* | *hh*:*mm*[:*ss*]]

Qualifiers

seconds Specifies the number of seconds to suspend processing. If you omit seconds, the default of 1 second is used.

hh:*mm* Specifies the hour and minute when you want the process to restart. *hh* is in 24-hour format. You can also specify the seconds with :*ss*.

Description

To suspend a process for a specified amount of time, use the command in the following format:

SLEEP [*seconds*]

To suspend a process until a specific time of day, use SLEEP in the following format:

SLEEP *hh*:*mm*[:*ss*]

Remember to use the 24-hour format. If you want to specify 7:30 p.m., you must give the time as 19:30.

Example

This example suspends the current process until 3:30 p.m.:

```
>SLEEP 15:30
```

Use SORT to display selected data from a file in sorted order.

Syntax

SORT [**DICT** | **USING** [**DICT**] *dictname*] *filename* [*records* | **FROM** *n*]
[*selection*] [*output.limiter*] [*sort*] [*output*] [*report.qualifiers*]

Qualifiers

DICT
Lists records in the file dictionary of *filename*. If you do not specify DICT, records in the data file are listed.

USING [DICT] *dictname*
If DICT is not specified, uses *dictname* as the dictionary of *filename*. If DICT is specified, the dictionary of *dictname* is used as the dictionary of *filename*.

filename
The file whose records you want to list. You can specify *filename* anywhere in the sentence. SORT uses the first word in the sentence that has a file descriptor in the VOC file as the filename.

records
Specifies the records to include in the list. You can specify as many record IDs as you want, separated by spaces. Enclose record IDs in single quotation marks to ensure that RetrieVe does not interpret them as field names or keywords.

FROM *n*
Specifies the records whose record IDs are stored in select list *n*.

selection
A selection expression specifying the conditions that data in a record must meet for the record to be selected. A selection expression begins with the keyword WITH. For syntax details, see the WITH keyword in Chapter 2.

output.limiter
An expression specifying the conditions that values in multivalued fields must meet for those values to be output. An output-limiting expression begins with the keyword WHEN. For syntax details, see the WHEN keyword in Chapter 2.

sort
A sort expression that specifies the type of sort and the field to sort on. The syntax is as follows:

BY *field*	Sort on *field* in ascending order.
BY.DSND *field*	Sort on *field* in descending order.

BY.EXP *field*	Explode multivalues in *field* and sort in ascending order.
BY.EXP.DSND *field*	Explode multivalues in *field* and sort in descending order.

For more information, see Chapter 2.

output

Specifies the fields whose data you want to list. The fields must be defined in the file dictionary. If you are listing dictionary records, the fields must be defined in the DICT.DICT file.

You can precede a field name with one field modifier. Field modifiers are:

AVG	ENUM	PCT
BREAK.ON	MAX	TOTAL
BREAK.SUP	MIN	TRANSPORT
CALC		

You can follow a field name with one or more field qualifiers. Field qualifiers are:

AS	COL.HDG	FMT
ASSOC	CONV	MULTI.VALUE
ASSOC.WITH	DISPLAY.LIKE	SINGLE.VALUE

For information about these keywords and their synonyms, see Chapter 2.

If you do not specify *output*, fields specified in the @ phrase are listed. If there is no @ phrase in the file dictionary, only record IDs are listed.

report.qualifiers

One or more of the following keywords:

COL.HDR.SUPP	FIRST	ID.ONLY	ONLY
COL.SPCS	FOOTER	ID.SUP	SAMPLE
COL.SUP	GRAND.TOTAL	LPTR	SAMPLED
COUNT.SUP	HDR.SUP	MARGIN	SUPP
DBL.SPC	HEADER	NO.SPLIT	VERT
DET.SUP		NOPAGE	

These keywords modify the report format. For information about them and their synonyms, see Chapter 2.

If you do not specify any report qualifiers, SORT produces a report with:

- UniVerse default heading and footing
- Single spacing between records
- Column headings on every page
- No control breaks
- Paged output to the screen or terminal

Description

SORT lists the selected records in the order specified by the sort expression. If there is no sort expression, it lists them in record ID order.

Specifying Output. In an *output* specification you can specify as many field names as you want, separated by spaces. You can specify field names explicitly or as a phrase containing field names. You can use field names and phrases together in the same output specification. Data in the specified fields is listed in columns in the order in which field names appear in the sentence or @ phrase.

Using Field Expressions. You can use field expressions in selection expressions, sort expressions, output specifications, and report clauses. A field expression can be a field name with or without field qualifiers, or it can be an EVAL expression. An EVAL expression is an I-descriptor expression specified on the command line, introduced by the keyword EVAL.

Suppressing Record IDs. By default, SORT displays record IDs in the first column of output. Use the ID.SUP keyword to suppress the display of record IDs.

SORT.ITEM

Use SORT.ITEM to display a complete listing of selected records.

Syntax

SORT.ITEM [**DICT** | **USING** [**DICT**] *dictname*] *filename* [*records* | **FROM** *n*] [*selection*] [*sort*] [*report.qualifiers*]

Qualifiers

DICT
: Lists records in the file dictionary of *filename*. If you do not specify DICT, records in the data file are listed.

USING [DICT] *dictname*
: If DICT is not specified, uses *dictname* as the dictionary of *filename*. If DICT is specified, the dictionary of *dictname* is used as the dictionary of *filename*.

filename
: The file whose records you want to list. You can specify *filename* anywhere in the sentence. SORT.ITEM uses the first word in the sentence that has a file descriptor in the VOC file as the filename.

records
: Specifies the records to include in the list. You can specify as many record IDs as you want, separated by spaces. Enclose record IDs in single quotation marks to ensure that RetrieVe does not interpret them as field names or keywords.

FROM *n*
: Specifies the records whose record IDs are stored in select list *n*.

selection
: A selection expression specifying the conditions that data in a record must meet for the record to be selected. A selection expression begins with the keyword WITH. For syntax details, see the WITH keyword in Chapter 2.

sort
: A sort expression that specifies the type of sort and the field to sort on. The syntax is as follows:

  BY *field* — Sort on *field* in ascending order.

  BY.DSND *field* — Sort on *field* in descending order.

  BY.EXP *field* — Explode multivalues in *field* and sort in ascending order.

  BY.EXP.DSND *field* — Explode multivalues in *field* and sort in descending order.

For more information, see Chapter 2.

report.qualifiers

One or more of the following keywords:

COL.HDR.SUPP	HDR.SUP	LPTR	SAMPLE
DBL.SPC	HEADER	MARGIN	SAMPLED
FIRST	ID.SUP	NOPAGE	SUPP
FOOTER			

These keywords modify the report format. For information about them and their synonyms, see Chapter 2.

If you do not specify any report qualifiers, SORT.ITEM produces a report with:

- UniVerse default heading
- Single spacing between records
- Paged output to the screen or terminal

Description

SORT.ITEM ignores RetrieVe field output specifications.

SORT.ITEM is like the Pick version of the COPY command (using the P or T option), but it lets you specify selection criteria and headings and footings.

SORT.LABEL

Use SORT.LABEL to specify a format suitable for mailing labels and other specialized block listings. The report lists the fields for each record in a block, with headings in the leftmost column. The labels are in sorted order.

Syntax

SORT.LABEL [**DICT** | **USING** [**DICT**] *dictname*] *filename*
[*records* | **FROM** *n*] [*selection*] [*output.limiter*] [*sort*] [*output*]
[*report.qualifiers*]

Qualifiers

DICT
Lists records in the file dictionary of *filename*. If you do not specify DICT, records in the data file are listed.

USING [DICT] *dictname*
If DICT is not specified, uses *dictname* as the dictionary of *filename*. If DICT is specified, the dictionary of *dictname* is used as the dictionary of *filename*.

filename
The file whose records you want to list. You can specify *filename* anywhere in the sentence. SORT.LABEL uses the first word in the sentence that has a file descriptor in the VOC file as the filename.

records
Specifies the records to include in the list. You can specify as many record IDs as you want, separated by spaces. Enclose record IDs in single quotation marks to ensure that RetrieVe does not interpret them as field names or keywords.

FROM *n*
Specifies the records whose record IDs are stored in select list *n*.

selection
A selection expression specifying the conditions that data in a record must meet for the record to be selected. A selection expression begins with the keyword WITH. For syntax details, see the WITH keyword in Chapter 2.

output.limiter
An expression specifying the conditions that values in multivalued fields must meet for those values to be output. An output-limiting expression begins with the keyword WHEN. For syntax details, see the WHEN keyword in Chapter 2.

sort A sort expression that specifies the type of sort and the field to sort on. The syntax is as follows:

BY *field*	Sort on *field* in ascending order.
BY.DSND *field*	Sort on *field* in descending order.
BY.EXP *field*	Explode multivalues in *field* and sort in ascending order.
BY.EXP.DSND *field*	Explode multivalues in *field* and sort in descending order.

For more information, see Chapter 2.

output Specifies the fields whose data you want to list. The fields must be defined in the file dictionary. If you are listing dictionary records, the fields must be defined in the DICT.DICT file.

If you do not specify *output*, fields specified in the @ phrase are listed. If there is no @ phrase in the file dictionary, only record IDs are listed.

report.qualifiers

One or more of the following keywords:

COL.HDR.SUPP	FOOTER	ID.SUP	SAMPLE
COUNT.SUP	HDR.SUP	LPTR	SAMPLED
DBL.SPC	HEADER	NOPAGE	SUPP
FIRST	ID.ONLY	ONLY	

These keywords modify the report format. For information about them and their synonyms, see Chapter 2.

If you do not specify any report qualifiers, SORT.LABEL produces a report with:

- UniVerse default heading and footing
- Paged output to the screen or terminal

Description

After you enter a SORT.LABEL command, the following prompt appears:

```
COUNT, ROWS, SKIP, INDENT, SIZE, SPACE [ ,C ] ?
```

Enter numeric values for each of these specifications (except C) to produce the formatted report. The following list describes what to enter:

Specification	Description
COUNT	The number of labels across the page or screen.
ROWS	The number of lines (fields) displayed or printed per label.
SKIP	The number of blank lines vertically between labels.
INDENT	The number of indented spaces from left margin to the first column of labels. Can be zero.
SIZE	The maximum number of characters in any display field.
SPACE	The number of blank spaces horizontally between labels.
C	Do not print empty fields. If you do not specify C, empty fields are printed as a series of blanks.

After you enter these specifications, a series of prompts requests headers for each row in a label. You can enter a header or press **Return** to specify no header.

```
Row 1 header?NAME
```

In the report these headers appear in the left margin for each set of labels. If INDENT is zero, the command does not prompt for row headers. Be sure to specify an indent area wide enough for the headers.

The total width specifications cannot exceed the capability of the output device, whether it is the terminal screen or the printer. Use the following formula to calculate the total width:

INDENT + COUNT(SIZE + SPACE)

To produce a continuous report without page breaks, use the COL.HDR.SUPP keyword. This keyword also suppresses the header at the top of the report.

Example

This example creates labels made up of the record ID, the first name, and the last name. The record IDs are listed by default. The second line is the format specification. COUNT specifies three labels across the page, with each label made up of three fields (ROWS). Two blank lines vertically separate each row of labels (SKIP), the first column of labels is indented 10 spaces from the left (INDENT), each

display field is 15 characters wide (SIZE), and 2 blank spaces horizontally separate each column of labels (SPACE).

Because INDENT specifies 10 spaces, SORT.LABEL prompts the user to enter a row header for each row.

```
>SORT.LABEL SUN.MEMBER FNAME LNAME
COUNT, ROWS, SKIP, INDENT, SIZE, SPACE [ ,C ] ? 3,3,2,10,15,2
Row 1 header ID
Row 2 header NAME
Row 3 header <Return>
```

This is the output:

```
SORT.LABEL SUN.MEMBER FNAME LNAME 11:09:10am  20 Oct 1995
PAGE    1

ID        2342            3452            4102
NAME      RALPH           JANE            LESLIE
          ADDAMS          SAMUEL          BROWN


ID        4108            4309            4439
NAME      HILLARY         EDGAR           DON
          HENDERSON       WILLIAMS        ALISON


ID        5205            5390            6100
NAME      ALICE           ALICE           BOB
          CRATCHETT       MIX             MASTERS


ID        6203            6783            7100
NAME      SAM             DAVID           ALICE
          YORK            HALE            WILLIAMS


ID        7505
NAME      HARRY
          EDWARDS


13 records listed.
```

SP.ASSIGN (UNIX)

Use SP.ASSIGN to set the line printer spooler options for each of the 256 logical print channels. These changes remain set until you use SP.ASSIGN again or use LOGOUT or QUIT. If you specify no options, SP.ASSIGN uses default settings.

Syntax

SP.ASSIGN [=*formname*] [*copies*] [**?**] [**D**] [{**F** | **Q**} *form*] [**R***unit*] [**H**] [**S**] [**O**] [**T**]

Qualifiers

formname	Sets the form name of *unit* to *formname*. You can use alphabetic and numeric characters to specify *formname*.
copies	The number of copies to print of each job.
?	Lists the current status. If you specify only ?, no unspecified options are changed to their defaults. As the last character of a UniVerse sentence, ? puts the sentence on the sentence stack without executing it. When you specify ? at the end of the command line, be sure to enter an extra space after the ? to prevent the sentence from being put on the sentence stack unexecuted.
D	Resets unspecified options to their default values.
F*form*	Sets the form number of *unit* to the number specified by *form*. Same as Q*form*.
Q*form*	Same as F*form*.
R*unit*	Indicates the logical print channel number.
H	Retains jobs in the spool queue after they are printed the first time. You can reprint held jobs using *usm* with the *–r* option or using the SP.EDIT command. Reprinting the job does not remove it from the spool queue. You can remove held jobs from the spool queue using the *–k* option of *usm* or using the SP.EDIT command.
S	Suppresses all output. If you specify S with the H option, jobs are sent to the spool queue in the hold state, not printed.
O	Causes the spool file to remain open after the report. Subsequent reports are appended to the same spool file.
T	Sets the form name to TAPE.

SP.ASSIGN (Windows NT)

Use SP.ASSIGN to set the line printer spooler options for Windows NT systems. These changes remain set until you use SP.ASSIGN again or use LOGOUT or QUIT. If you specify no options, SP.ASSIGN uses default settings.

Syntax

SP.ASSIGN [*copies*] [{**F** | **Q**} *form*] [**S**] [**O**] [**T**]

Qualifiers

copies	The number of copies to print of each job. In GDI mode, the number of copies is passed to the printer driver. In raw mode, this number is passed to Windows NT as a parameter for the print processor.
F*form*	Sets the form number of *unit* to the number specified by *form*. Same as Q*form*.
Q*form*	Same as F*form*.
S	Suppresses all output.
O	Causes the spool file to remain open after the report. Subsequent reports are appended to the same spool file.
T	Sets the form name to TAPE.

SP.EDIT (UNIX)

Use SP.EDIT to select held spool files from the spool queue and send them to either the terminal or the printer.

Syntax

SP.EDIT [*entry*[–*entry*]] [**F***form*[–*form*]] [**L**] [**R**] [**U**] [**MD**] [**MS**] [**O**]

Qualifiers

entry	The number of the entry to manipulate.
F*form*	Specifies only entries from the specified form numbers.
L	Lists the first 512 bytes of each spool file before the `Display` prompt. This option overrides the action of the MD and MS options.
R	Causes spooled files in the hold state to use the current SETPTR characteristics. Without this option, spooled files use the options they were initially spooled with. This changes the default options for the job.
U	Looks at files belonging to other users. You must be a UniVerse Administrator to use this option.
MD	Deletes all selected files.
MS	Spools all selected files.
O	Looks at active and waiting files and files in a held (or paused) state.

Description

After you enter **`SP.EDIT`**, the `Display` prompt appears. SP.EDIT prints spooler statistics for the current file on the terminal before displaying the `Display` prompt. The format of the spooler statistics follow:

Entry	#	Status	:	Size	:
Name	:	Banner	:	Message	:
Priority	:	Copies	:	Delay	:
Pages	:	Eject	:	Delete	:
Form	:	Printer	:	Options	:

These fields display the following statistics:

Entry	The job number in the spool queue.
Name	The login ID of the user who sent the job.
Priority	The priority of the job. A lower number indicates higher priority.
Pages	The number of pages to print. This field can contain a single page number, a range of page numbers separated by a dash or a comma, or the word `All`.
Form	The form on which to print the job.
Status	The state of the job. This can be `Active`, `Wait`, or `Hold`. An asterisk (*) in this field indicates that the file requeues after printing.
Banner	The main text printed on the header page.
Copies	The number of copies to print.
Eject	Eject extra page after the job (`Yes` or `No`).
Printer	The name of the printer. If no printer is specified for the job, this field contains `[Any]`.
Size	The size of the file in bytes.
Message	The secondary text printed under the banner on the header page.
Delay	The number of seconds to delay before printing.
Delete	Delete the temporary printing source file after printing (`Yes` or `No`). This is normally `Yes`.
Options	The printing options set for this file. `None` indicates no options. `LNUM` indicates that line numbering is set. `FTN` indicates that the job is passed through a FORTRAN filter before printing.

The Display Prompt. SP.EDIT prompts you to enter display specifications:

```
Display (Y/N/S/D/X/<CR>) ?
```

The responses to the `Display` prompt are as follows:

Y Displays first 512 bytes of the file.

- For files in the active state, SP.EDIT displays the following prompt:

```
Kill (Y/N=CR) ?
```

The responses to the `Kill` prompt are as follows:

Y Displays the `Hold in Queue` prompt:

```
Hold in Queue (Y=CR/N) ?
```

The responses to the `Hold in Queue` prompt are as follows:

Y (or **Return**) Leaves the job in the spool queue in the hold state and activate requeuing for the file.

N Removes the job from the spool queue.

N Displays the `Display` prompt for the next file.

- For files in the wait state, SP.EDIT displays the following prompt:

```
Hold in Queue (Y/N=CR) ?
```

The responses to the `Hold in Queue` prompt are as follows:

Y Leaves the job in the spool queue in the hold state and activates requeuing for the file.

N (or **Return**) Displays the `Delete` prompt.

- For files in all other states, SP.EDIT displays the `Spool` prompt.

N Does not display the first 512 bytes of the file, but proceeds as with Y.

S Displays the `Spool` prompt.

D Displays the `Delete` prompt.

X Exits SP.EDIT and returns to the command line.

If you press **Return** at the `Display` prompt, SP.EDIT displays the `Display` prompt for the next file.

The Spool Prompt. If you enter **S** at the `Display` prompt, SP.EDIT displays the following prompt:

```
Spool (Y/N=CR) ?
```

The responses to the `Spool` prompt are as follows:

Y SP.EDIT displays either a `Hold in Queue` prompt or a `Pages to Output` prompt.

- For files that are not set to requeue after printing, SP.EDIT displays the following prompt:

  ```
  Hold in Queue (Y/N=CR) ?
  ```

  The responses to the `Hold in Queue` prompt are as follows:

  Y Sets the file to requeue after printing and displays the `Pages to Output` prompt.

  N (or **Return**) Displays the `Pages to Output` prompt.

- For files that are set to requeue after printing and files that have been processed by `Hold in Queue`, SP.EDIT displays the following prompt:

  ```
  Pages to Output :
  ```

  Enter a page number, a starting and ending page number separated by a dash (–) or a comma (,), or **`all`** to indicate which pages to print. A **Return** does not modify the current status.

N (or **Return**) displays the `Delete` prompt.

The Delete Prompt. If you enter **`D`** at the `Display` prompt or **`N`** at the `Spool` prompt, SP.EDIT displays the following prompt:

```
Delete (Y/N=CR) ?
```

The responses to the `Delete` prompt are as follows:

Y Removes the job from the spool queue, then displays the `Display` prompt for the next file.

N (or **Return**) Displays the `Display` prompt for the next file.

SP.EDIT (Windows NT)

Use SP.EDIT to administer print jobs in the Windows NT printer queues.

Syntax

SP.EDIT [*entry*[*–entry*]] [**F***form*[*–form*]] [**L**] [**R**] [**U**] [**MD**] [**MS**] [**O**]

Qualifiers

entry	The number of the entry to manipulate.
F*form*	Specifies only entries from the specified form numbers.
L	Displays the first 512 bytes of a print job, instead of prompting for actions. This qualifier only works for print jobs created in Windows NT raw mode. This option overrides the action of the MD and MS options.
R	Causes spooled files in the hold state to use the current SETPTR characteristics. Without this option, spooled files use the options they were initially spooled with. This changes the default options for the job.
U	Looks at files belonging to other users. You must be a UniVerse Administrator to use this option.
MD	Deletes all selected files.
MS	Spools all selected files.
O	Looks at active and waiting files as well as files in a held (or paused) state.

Description

After you enter SP.EDIT, the `Display` prompt appears. SP.EDIT prints spooler statistics for the current file on the terminal before displaying the `Display` prompt. The format of the spooler statistics follow:

```
Entry    #    Status   :    Size     :
Jobname  :    Username :    Printer  :
Priority :    Copies   :    Delay    :
Form     :    Created  :
```

These fields display the following statistics:

Entry	The job number in the spool queue.
Jobname	The name of the print job, taken from the BANNER attribute when the job was created. If a banner has not been set, the job name defaults to UniVerse.
Priority	The priority of the job, in UniVerse format. A lower number indicates higher priority.
Form	The form name specified for the job.
Status	The current state of the job. If the job is simply waiting to be printed, no status is shown; otherwise, it can be `Paused` or `Printing`.
Username	The user name of the user who sent the print job.
Copies	The number of copies to print.
Created	The time and date the spooled file was created.
Size	The size of the file in bytes.
Printer	The name of the printer.
Delay	The start time specified for printing.

The Display Prompt. SP.EDIT prompts you to enter display specifications:

```
Display (Y/N/S/D/X/<CR>) ?
```

The responses to the `Display` prompt are as follows:

Y Displays first 512 bytes of the file, if the print job was created in RAW mode.

- For files already printing, SP.EDIT displays the following prompt:

  ```
  Kill (Y/N=CR) ?
  ```

  The responses to the `Kill` prompt are as follows:

  Y Displays the `Are you sure` prompt:

  ```
  Are you sure (Y=CR/N) ?
  ```

  The responses to the `Are you sure` prompt are as follows:

  Y Cancels printing of this job and removes it from the queue.

  N (or **Return**) Goes to the `Display` prompt for the next file.

  N Displays the `Display` prompt for the next file.

- For files waiting to be printed, SP.EDIT displays the following prompt:

  ```
  Hold in Queue (Y/N=CR) ?
  ```

  The responses to the `Hold in Queue` prompt are as follows:

  Y Pauses the print job.

  N (or **Return**) Displays the `Delete` prompt.

- For files that have been paused, or that are in any other state, SP.EDIT displays the `Spool` prompt.

N Does not display the first 512 bytes of the file, but proceeds as with Y.

S Does not display the first 512 bytes of the file, but proceeds as with Y.

D Displays the `Delete` prompt.

X Exits SP.EDIT and returns to the command line.

If you press **Return** at the `Display` prompt, SP.EDIT displays the `Display` prompt for the next file.

The Spool Prompt. If you enter **`Y`** at the `Display` prompt, and the file is currently paused or in another state (other than printing), SP.EDIT displays the following prompt:

```
Spool (Y/N=CR) ?
```

The responses to the `Spool` prompt are as follows:

Y Resumes the print job.

N (or **Return**) Displays the `Delete` prompt.

The Delete Prompt. If you enter **`D`** at the `Display` prompt or **`N`** at the `Spool` prompt, SP.EDIT displays the following prompt:

```
Delete (Y/N=CR) ?
```

The responses to the `Delete` prompt are as follows:

Y Cancels the print job, removing it from the printer queue and moves on to the next print job.

N (or **Return**) Displays the `Display` prompt for the next file.

Use SP.TAPE to print a report that has been stored on a spooled tape.

Syntax

SP.TAPE [*printer*] [*alignment*]

Qualifiers

printer The name of a printer defined in the &DEVICE& file.

alignment A number specifying how many lines to print at the beginning of the report so you can align your form in the printer. The number must be greater than or equal to 0. When you use *alignment*, SP.TAPE prints the number of lines from the beginning of the tape and asks if the form is aligned in the printer. It repeats this process until you indicate that the alignment is correct.

Specify **N** if you do not want to align the printer.

Do not use this parameter if you are printing to the system printer.

Description

You must be sure that the tape unit is assigned to you (see ASSIGN).

If you issue the SP.TAPE command with no qualifiers, SP.TAPE prompts you for the information.

You can create a report on tape using the ASSIGN command to assign a tape device as LPTR 0. Subsequent output to the printer will be spooled to the tape.

Examples

This example sends a print job stored on tape to the printer LP via the spooler. SP.TAPE prints the first 10 lines of the print job and asks if the alignment is correct. When the user enters **Y**, SP.TAPE spools the print job to the printer.

```
>SP.TAPE
Printer location = LP
Form alignment? (Number of lines or N) = 10

Is the form properly aligned? (Y/N) = Y
```

```
Spooling to printer "LP".
>
```

The next example specifies printer LP and no alignment (N) on the command line:

```
>SP.TAPE LP N

Spooling to printer "LP".
>
```

Use SPOOL to send records to the system spooler for printing, to examine the spool queue, or to cancel a print job that is in the spool queue. The first available printer in the queue prints the records.

Syntax

SPOOL { **–LIST** | **–CANCEL** *nnn* [*nnn* ...] | *filename record* } [*options*]

Qualifiers

–LIST	Lists the items in the spool queue. This lists the user name or account name, the print number that SPOOL assigns, the filename, the size of the job, options, form, defer, and so on.
–CANCEL *nnn*	Deletes print jobs from the printer queue. *nnn* is the number of the print job you want to cancel. You can specify multiple print job numbers, separated by spaces.
filename record	The name of the file and the record ID of the record you want to print.

options can be any of the following:

–COPIES *n*	Specifies the number of copies to print.
–FORM *formname*	Specifies a special form. Before the file prints, the system operator must indicate the form is in the printer. The name can be up to six characters long.
–AS *alias*	Prints *alias* instead of the filename on the flag page.
–AT *destination*	Specifies a printer location.
–NOHEAD	Suppresses the flag page.

Description

SPOOL can use select list 0. SPOOL ignores all options if the records are spooled to the &HOLD& file.

To spool records to magnetic tape, assign a tape drive to a logical print channel and set up a form called TAPE. Use the following syntax to spool records to tape:

SPOOL *filename record* **–FORM TAPE**

SPOOL (Windows NT)

Use SPOOL to send records to the system spooler for printing, to examine the spool queue, or to cancel a print job that is in the spool queue. The first available printer in the queue prints the records.

Syntax

SPOOL { **–LIST** [*destination*] | **–CANCEL** *nnn* [*nnn ...*] | **–MODIFY** *option* | *filename record* } [*options*]

Qualifiers

–LIST
: Displays a list of jobs that are waiting to be printed. *destination* is the printer name. If you specify *destination*, only the jobs for that printer are listed; otherwise all jobs for all printers are listed.

–CANCEL *nnn*
: Deletes print jobs from the printer queue. *nnn* is the number of the print job you want to cancel. You can specify multiple print job numbers, separated by spaces. If you are an UniVerse Administrator, all waiting jobs are deleted; otherwise, only the jobs you created are deleted.

–MODIFY *nnn*
: Changes the attributes of a print job that is already queued for printing. A UniVerse Administrator can modify all jobs in the queue. Other users can modify only their own jobs.

  option is one of the following:

  HOLD
  : Pauses a print job. The paused print job can be resumed by using the NOHOLD option, or by resuming the job from the Windows NT Print Manager.

  NOHOLD
  : Turns off the HOLD option.

  PRIORITY
  : Sets the print job's priority. The highest priority is 1 and the lowest is 255. The priority you enter is converted to a number within the range for Windows NT, which goes from 99 through 1. For more information, see the Windows NT SETPTR command.

filename record
: The name of the file and the record ID of the record you want to print.

options can be any of the following:

–COPIES *n*	Specifies the number of copies to print.
–FORM *formname*	Specifies a special form. Before the file prints, the system operator must indicate the form is in the printer. The name can be up to six characters long.
–AS *alias*	Prints *alias* instead of the filename on the flag page.
–AT *destination*	Specifies a printer location.
–NOHEAD	Suppresses the flag page.

Description

SPOOL can use select list 0.

SPOOL ignores all options if the records are spooled to the &HOLD& file.

To spool records to magnetic tape, assign a tape drive to a logical print channel and set up a form called TAPE. Use the following syntax to spool records to tape:

SPOOL *filename record* **–FORM TAPE**

SREFORMAT

Use SREFORMAT to create an inverted file. You can direct the output of the SREFORMAT command to another file or to magnetic tape.

Syntax

SREFORMAT [**DICT** | **USING** [**DICT**] *dictname*] *filename*
[*records* | **FROM** *n*] [*selection*] [*output.limiter*] [*sort*] *output*
[*modifiers*] [**MTU** *mtu*] [**BLK** *size*] [*labelopt*]

Qualifiers

DICT
: Reformats records in the file dictionary of *filename*. If you do not specify DICT, records in the data file are reformatted.

USING [DICT] *dictname*
: If DICT is not specified, uses *dictname* as the dictionary of *filename*. If DICT is specified, the dictionary of *dictname* is used as the dictionary of *filename*.

filename
: The file whose records you want to reformat. You can specify *filename* anywhere in the sentence. SREFORMAT uses the first word in the sentence that has a file descriptor in the VOC file as the filename.

records
: Specifies the records to reformat. You can specify as many record IDs as you want, separated by spaces. Enclose record IDs in single quotation marks to ensure that RetrieVe does not interpret them as field names or keywords.

FROM *n*
: Specifies the records whose record IDs are stored in select list *n*.

selection
: A selection expression specifying the conditions that data in a record must meet for the record to be selected. A selection expression begins with the keyword WITH. For syntax details, see the WITH keyword in Chapter 2.

output.limiter
: An expression specifying the conditions that values in multivalued fields must meet for those values to be output. An output-limiting expression begins with the keyword WHEN. For syntax details, see the WHEN keyword in Chapter 2.

sort A sort expression that specifies the type of sort and the field to sort on. The syntax is as follows:

BY *field*	Sort on *field* in ascending order.
BY.DSND *field*	Sort on *field* in descending order.
BY.EXP *field*	Explode multivalues in *field* and sort in ascending order.
BY.EXP.DSND *field*	Explode multivalues in *field* and sort in descending order.

For more information, see Chapter 2.

output Specifies the fields whose data you want to include. You must specify at least one field. The fields must be defined in the file dictionary. If you are listing dictionary records, the fields must be defined in the DICT.DICT file.

You can precede a field name with the CALC field modifier. You cannot follow a field name with field qualifiers.

modifiers One or more of the following keywords:

FIRST	ID.SUP	SAMPLE
ID.ONLY	ONLY	SAMPLED

These keywords modify the report format. For information about them and their synonyms, see Chapter 2

MTU *mtu* Specifies a drive other than 0. *mtu* indicates the mode (*m*), number of tracks (*t*), and tape unit number (*u*) of a tape drive. You can use the default for these values, 000, which indicates ASCII mode, 9-track tape, and unit number 0, otherwise SREFORMAT ignores the track specification. See the MTU keyword in Chapter 2.

BLK *size* Specifies the block size if it is different from the default of 8192 bytes.

labelopt One of the following:

PICK.FORMAT (for Pick tape format)

INFORMATION.FORMAT (for Prime INFORMATION tape format)

REALITY.FORMAT (for REALITY tape format)

SREFORMAT

Description

After you enter an SREFORMAT command, the following prompt appears:

```
File Name =
```

Enter a valid UniVerse filename as a destination file, or enter the keyword TAPE (or BDE in IN2 flavor accounts). SREFORMAT directs output of the command either to the file or to magnetic tape, respectively. If you direct the output to another file, you must specify a filename other than the source filename. If you press **Return** at the `File Name =` prompt, no processing occurs.

When you send output to another file, SREFORMAT uses the first field defined by the output specification as the record ID in the new file. The other output fields become fields in the new file. The order of fields in the output specification of the SREFORMAT command determines the order of fields in the new file. The new file must already exist, and you must create new dictionary fields manually if you need them.

When you send output to magnetic tape, SREFORMAT writes one tape record for each reformatted record. Use the T.ATT command or the BLK keyword to specify tape record size. The default tape record size is 8192 bytes. The new record ID and the fields for the data record are concatenated, ending with a segment mark. They are either padded or truncated, depending on the size of the tape record. You can use MTU, BLK, and *labelopt* when directing output to tape.

SREFORMAT ignores control breaks and totals.

Use SSELECT to create a list of records that meet specified criteria, sorted by record ID. You can then use this list with other commands in the UniVerse system. Because the list contains the data or record IDs from selected records, it is called a select list.

Syntax

SSELECT [**DICT** | **USING** [**DICT**] *dictname*] *filename* [*records* | **FROM** *n*] [*selection*] [*output.limiter*] [*sort*] [**SAVING** [**UNIQUE**] *field* [**NO.NULLS**]] [**TO** *n*] [*report.qualifiers*]

Qualifiers

DICT
: Selects records in the file dictionary of *filename*. If you do not specify DICT, records in the data file are selected.

USING [DICT] *dictname*
: If DICT is not specified, uses *dictname* as the dictionary of *filename*. If DICT is specified, the dictionary of *dictname* is used as the dictionary of *filename*.

filename
: The file whose records you want to select. You can specify *filename* anywhere in the sentence. SSELECT uses the first word in the sentence that has a file descriptor in the VOC file as the filename.

records
: Specifies the records to include in the list. You can specify as many record IDs as you want, separated by spaces. Enclose record IDs in single quotation marks to ensure that RetrieVe does not interpret them as field names or keywords.

FROM *n*
: Specifies the records whose record IDs are stored in select list *n*.

selection
: A selection expression specifying the conditions that data in a record must meet for the record to be selected. A selection expression begins with the keyword WITH. For syntax details, see the WITH keyword in Chapter 2.

output.limiter
: An expression specifying the conditions that values in multivalued fields must meet for those values to be output. An output-limiting expression begins with the keyword WHEN. For syntax details, see the WHEN keyword in Chapter 2.

sort A sort expression that specifies the type of sort and the field to sort on. The syntax is as follows:

BY *field*	Sort on *field* in ascending order.
BY.DSND *field*	Sort on *field* in descending order.
BY.EXP *field*	Explode multivalues in *field* and sort in ascending order.
BY.EXP.DSND *field*	Explode multivalues in *field* and sort in descending order.

For more information, see Chapter 2.

SAVING Specifies that the list be made up of field values instead of record IDs. Do not use a SAVING clause on multivalued fields.

UNIQUE Omits duplicates of the saved field from the select list.

field The name of a field whose values you want to constitute the select list.

NO.NULLS Omits empty string values in the saved field from the select list.

TO *n* The number to assign to the list, 0 through 10. If you do not specify a number, SSELECT creates select list 0.

report.qualifiers

One or more of the following keywords:

FIRST LPTR SAMPLE SAMPLED

These keywords modify the report format. For information about them and their synonyms, see Chapter 2.

Use STAT to total the numeric values in specified fields in a file. STAT also counts the selected records, and averages and totals the data contained in the fields.

Syntax

STAT [**DICT** | **USING** [**DICT**] *dictname*] *filename* [*records* | **FROM** *n*]
[*selection*] [*output.limiter*] [*fields*] [*report.qualifiers*]

Qualifiers

DICT
Processes records in the file dictionary of *filename*. If you do not specify DICT, records in the data file are processed.

USING [DICT] *dictname*
If DICT is not specified, uses *dictname* as the dictionary of *filename*. If DICT is specified, the dictionary of *dictname* is used as the dictionary of *filename*.

filename
The file whose records you want to process. You can specify *filename* anywhere in the sentence. STAT uses the first word in the sentence that has a file descriptor in the VOC file as the filename.

records
Specifies the records for which you want statistics. You can specify as many record IDs as you want, separated by spaces. Enclose record IDs in single quotation marks to ensure that RetrieVe does not interpret them as field names or keywords.

FROM *n*
Specifies the records whose record IDs are stored in select list *n*.

selection
A selection expression specifying the conditions that data in a record must meet for the record to be selected. A selection expression begins with the keyword WITH. For syntax details, see the WITH keyword in Chapter 2.

output.limiter
An expression specifying the conditions that values in multivalued fields must meet for those values to be output. An output-limiting expression begins with the keyword WHEN. For syntax details, see the WHEN keyword in Chapter 2.

fields
The names of fields containing numeric data for which you want statistics. If a field contains nonnumeric data, STAT counts it but does not average or total the data.

report.qualifiers

One or more of the following keywords:

COL.HDR.SUPP	FIRST	ID.SUP	SAMPLE
COL.SPCS	FOOTER	LPTR	SAMPLED
COL.SUP	HDR.SUP	MARGIN	SUPP
COUNT.SUP	HEADER	NOPAGE	VERT
DET.SUP	ID.ONLY	ONLY	

These keywords modify the report format. For information about them and their synonyms, see Chapter 2.

If you do not specify any report qualifiers, STAT produces a report with:

- UniVerse default heading and footing
- Column headings on every page
- Paged output to the screen or terminal

Use STATUS to display information about users and resources.

Syntax

STATUS [*option*] [**NO.PAGE**]

Qualifiers

NO.PAGE	Suppresses automatic paging.

option can be one of the following:

DISKS	Lists usage of all disks on the system.
ME	Lists all tasks related to your account. ME displays the same report as the LISTME command.
NETWORK	Lists the system name, node name, release number, version number, and machine name of your system.
USERS	**Windows NT**. USERS displays the same report as the LISTU command. **UNIX.** USERS lists all tasks for all users.
ALL	Lists all the status information.

If you do not specify any option, STATUS produces a full report (same as ALL).

SUM

Use SUM to add the numeric values in specified fields of a file and list the totals at the end of each column of the report. You must include the name of at least one numeric field or a phrase name that includes a numeric field in the SUM sentence.

Syntax

SUM [**DICT** | **USING** [**DICT**] *dictname*] *filename* [*records* | **FROM** *n*]
[*selection*] [*output.limiter*] [*fields*] [*report.qualifiers*]

Qualifiers

DICT
Processes records in the file dictionary of *filename*. If you do not specify DICT, records in the data file are processed.

USING [DICT] *dictname*
If DICT is not specified, uses *dictname* as the dictionary of *filename*. If DICT is specified, the dictionary of *dictname* is used is used as the dictionary of *filename*.

filename
The file whose records you want to total. You can specify *filename* anywhere in the sentence. SUM uses the first word in the sentence that has a file descriptor in the VOC file as the filename.

records
Specifies the records you want to total. You can specify as many record IDs as you want, separated by spaces. Enclose record IDs in single quotation marks to ensure that RetrieVe does not interpret them as field names or keywords.

FROM *n*
Specifies the records whose record IDs are stored in select list *n*.

selection
A selection expression specifying the conditions that data in a record must meet for the record to be selected. A selection expression begins with the keyword WITH. For syntax details, see the WITH keyword in Chapter 2.

output.limiter
An expression specifying the conditions that values in multivalued fields must meet for those values to be output. An output-limiting expression begins with the keyword WHEN. For syntax details, see the WHEN keyword in Chapter 2.

fields
The names of fields containing numeric data to total. If a field contains nonnumeric data, SUM counts it but does not average or total the data.

report.qualifiers

One or more of the following keywords:

COL.HDR.SUPP	FIRST	ID.SUP	SAMPLE
COL.SPCS	FOOTER	LPTR	SAMPLED
COL.SUP	HDR.SUP	MARGIN	SUPP
COUNT.SUP	HEADER	NOPAGE	VERT
DET.SUP	ID.ONLY	ONLY	

These keywords modify the report format. For information about them and their synonyms, see Chapter 2.

If you do not specify any report qualifiers, SUM produces a report with:

- UniVerse default heading and footing
- Column headings on every page
- Paged output to the screen or terminal

SUSPEND.RECOVERY

Use SUSPEND.RECOVERY to suspend the transaction logging system if it is currently enabled. You must be a UniVerse Administrator logged in to the UV account to use SUSPEND.RECOVERY.

Syntax

SUSPEND.RECOVERY

Description

SUSPEND.RECOVERY suspends the transaction logging system. In this state, updates to recoverable files are prohibited, except by means of the roll-forward utility, and any attempt to update a recoverable file waits until the state changes. You can reenable transaction logging with ENABLE.RECOVERY.

While transaction logging is in the suspended state, programs that request writes to the log file wait until the state changes.

Example

This example suspends transaction logging:

```
>SUSPEND.RECOVERY
Request to Suspended Logging Subsystem made at 12:47:59 on 01 OCT 1996.
You can use the 'Display logging state' menu to verify the current state
of the logging subsystem.
```

Use T.ATT to assign control of a tape drive to your account. Use this command before you try to access a tape drive.

Syntax

T.ATT [**MTU** [*mtu*]] [[**BLK**] *size* | (*size*)]

Qualifiers

MTU — Specifies a tape drive. Use MTU if you have more than one drive assigned to you or if the assigned drive is not drive 0.

mtu — Indicates the mode (*m*), number of tracks (*t*), and tape unit number (*u*) of a tape drive. T.ATT uses only the unit specification and ignores the mode and track specifications. See the MTU keyword in Chapter 2.

BLK *size* — Specifies the tape block size as *size*. Subsequent tape operations use the block size specified by T.ATT. If you do not specify the block size, the default block size defined in the &DEVICE& file is used.

If the block size is not defined in the &DEVICE& file, *size* is taken from field 5 of the T.ATT VOC entry. In IDEAL and INFORMATION flavor accounts, there is no default block size; variable-length tape records are written and read, if allowed by the drive. In PICK, REALITY, and IN2 flavor accounts, the default block size is 8192.

Description

If the tape drive is already assigned to another user, T.ATT displays an error message. Wait until the other user logs out or uses T.DET before you issue another T.ATT.

The device must have the proper permissions for you to attach it.

T.BCK

Use T.BCK to back up a specified number of tape records or to back up over a previous end-of-file mark.

Syntax

T.BCK [**MTU** [*mtu*]] [*nn*]

Qualifiers

MTU	Specifies a tape drive. Use MTU if you have more than one drive assigned to you or if the assigned drive is not drive 0.
mtu	Indicates the mode (*m*), number of tracks (*t*), and tape unit number (*u*) of a tape drive. T.BCK uses only the unit specification and ignores the mode and track specification. See the MTU keyword in Chapter 2.
nn	The number of tape records you want to back up over. If you do not specify *nn*, T.BCK backs up over the previous end-of-file mark.

Description

If the drive encounters an end-of-file mark before it backs up over the specified number of tape records, or if you do not specify *nn*, the tape is positioned before the end-of-file mark. A subsequent read operation gets an immediate end-of-file indicator.

Use T.DET to relinquish control of the tape drive.

Syntax

T.DET [**MTU** [*mtu*]]

Qualifiers

MTU	Specifies a tape drive. Use MTU if you have more than one drive assigned to you or if the assigned drive is not drive 0.
mtu	Indicates the mode (*m*), number of tracks (*t*), and tape unit number (*u*) of a tape drive. T.DET uses only the unit specification and ignores the mode and track specifications. See the MTU keyword in Chapter 2.

Description

The T.DET command runs a BASIC program that executes an UNASSIGN command.

T.DUMP

Use T.DUMP to copy files from disk to tape. Before you use T.DUMP, assign the tape drive using ASSIGN or T.ATT.

Syntax

T.DUMP [**DICT**] *filename* [*records*] [**FROM** *n*] [*selection*] [*sort*]
[**MTU** [*mtu*]] [**BLK** *size*] [*modifiers*]

Qualifiers

DICT — The file dictionary.

filename — The name of the file containing the records you want to dump to tape. You can specify *filename* anywhere in the sentence. T.DUMP uses the first word in the sentence that has a file descriptor in the VOC file as the filename.

records — Specifies the records to include in the list. Enclose record IDs in single quotation marks to prevent RetrieVe from interpreting them as field names. You can specify as many record IDs as you want, separated by spaces. T.DUMP also accepts record IDs from an active select list.

FROM *n* — Specifies that select list *n* is to be used.

selection — A selection expression specifying the conditions that data in a record must meet for the record to be copied to tape. A selection expression begins with the keyword WITH. For syntax details, see the WITH keyword in Chapter 2.

sort — A sort expression that specifies the type of sort and the field to sort on. The syntax is as follows:

BY *field*	Sort on *field* in ascending order.
BY.DSND *field*	Sort on *field* in descending order.
BY.EXP *field*	Explode multivalues in *field* and sort in ascending order.
BY.EXP.DSND *field*	Explode multivalues in *field* and sort in descending order.

MTU — Specifies a tape drive. Use MTU if you have more than one drive assigned to you or if the assigned drive is not drive 0.

mtu Indicates the mode (*m*), number of tracks (*t*), and tape unit number (*u*) of a tape drive. You can use the default for these values, 000, which indicate ASCII mode, 9-track tape, and unit number 0. The track specification is otherwise ignored. See the MTU keyword in Chapter 2.

BLK *size* Indicates the block size if the block size is different from the default (exact size depends on the tape device you are using).

modifiers can be any of the following:

HEADER *text* Specifies *text* to include in the tape label. Note that REALITY format text is 16 characters maximum. PICK format text is 47 characters maximum, but this 47-character maximum must also include the filename and a space before the text.

HDR.SUP Suppresses the tape label.

PICK.FORMAT Specifies Pick tape format.

INFORMATION.FORMAT Specifies Prime INFORMATION tape format.

REALITY.FORMAT Specifies REALITY tape format.

Description

The simplest form of the T.DUMP command is as follows:

T.DUMP *filename*

This syntax writes all records in the data file to tape. If you want to save records in the data file and the file dictionary, execute T.DUMP separately for the data file and the dictionary. T.DUMP puts an end-of-file mark at the end of each operation.

At the end of a series of consecutive T.DUMPs, two additional end-of-file marks are written. This occurs when you switch from write mode to read mode.

If you specify INFORMATION.FORMAT, T.DUMP ignores HEADER and HDR.SUP.

Note: Multireel tape handling is supported only for device types DC, DT, and F in PICK flavor accounts.

T.EOD

Use T.EOD to advance a tape to the end-of-data mark. The end-of-data mark is two consecutive end-of-file marks.

Syntax

T.EOD [**MTU** [*mtu*]]

Qualifiers

MTU Specifies a tape drive. Use MTU if you have more than one drive assigned to you or if the assigned drive is not drive 0.

mtu Indicates the mode (*m*), number of tracks (*t*), and tape unit number (*u*) of a tape drive. T.EOD uses only the unit specification and ignores the mode and track specifications. See the MTU keyword in Chapter 2.

Use T.FWD to advance a specified number of tape records or to the end-of-file mark.

Syntax

T.FWD [**MTU** [*mtu*]] [*nn*]

Qualifiers

MTU	Specifies a tape drive. Use MTU if you have more than one drive assigned to you or if the assigned drive is not drive 0.
mtu	Indicates the mode (*m*), number of tracks (*t*), and tape unit number (*u*) of a tape drive. T.FWD uses only the unit specification and ignores the mode and track specifications. See the MTU keyword in Chapter 2.
nn	The number of tape records to advance.

Description

If the drive encounters an end-of-file mark before it advances over the specified number of tape records, or if you do not specify *nn*, the tape is positioned after the next end-of-file mark.

T.LOAD

Use T.LOAD to copy files created by T.DUMP from tape to disk. Use ASSIGN to assign the tape drive before you use T.LOAD.

Syntax

T.LOAD [**DICT**] *filename* [*selection*] [**MTU** [*mtu*]] [*modifiers*]

Qualifiers

DICT Specifies the file dictionary.

filename The name of the file into which you want to load the records. You can specify *filename* anywhere in the sentence. T.LOAD uses the first word in the sentence that has a file descriptor in the VOC file as the filename.

selection A selection expression specifying the conditions that data in a record must meet for the record to be loaded from tape to disk. A selection expression begins with the keyword WITH. For syntax details, see the WITH keyword in Chapter 2.

MTU Specifies a tape drive. Use MTU if you have more than one drive assigned to you or if the assigned drive is not drive 0.

mtu Indicates the mode (*m*), number of tracks (*t*), and tape unit number (*u*) of a tape drive. T.LOAD uses only the unit specification and ignores the track and mode specification. See the MTU keyword in Chapter 2.

modifiers can be any of the following:

OVERWRITING Overwrites records that already exist on disk. If you do not include this keyword, T.LOAD loads only those records that do not already exist.

PICK.FORMAT Specifies Pick tape format.

INFORMATION.FORMAT Specifies Prime INFORMATION tape format.

REALITY.FORMAT Specifies REALITY tape format.

Note: If the configurable parameter THDR512 is 0, the tape label size for a PICK or REALITY flavor cartridge tape created in UniVerse differs from the size for one created on a Pick system. (The length of the tape label on a Pick system is always 512.) If you want to copy a file that was created on a Pick system, assign the tape with a block size of 512, then use T.LOAD to copy the file to disk. If you want to copy a file that was created on a UniVerse system in a PICK or REALITY flavor account, use T.READ to determine the block size, reassign the tape to this block size, and reposition the tape before using T.LOAD to copy the file to disk.

If THDR512 is set, UniVerse always reads and writes tape labels with a size of 512 characters regardless of tape block size.

Multireel tape handling is supported only for device types DC, DT, and F in PICK and REALITY flavor accounts.

T.RDLBL

Use T.RDLBL to read a tape label at the beginning of a reel.

Syntax

T.RDLBL [**MTU** [*mtu*]] [*n*]

Qualifiers

MTU	Specifies a tape drive. Use MTU if you have more than one drive assigned to you or if the assigned drive is not drive 0.
mtu	Indicates the mode (*m*), number of tracks (*t*), and tape unit number (*u*) of a tape drive. The default for these values, 000, indicates ASCII mode, 9-track tape, and unit number 0. T.RDLBL ignores the track specification. See the MTU keyword in Chapter 2.
n	Specifies a tape reel number. If it does not match the actual tape reel number, T.RDLBL displays the label with an error message.

Description

T.RDLBL reads the tape label and displays the reel number, block size, time, and date from when the tape was written, and a header text. T.RDLBL changes tape block size if necessary and prints a message that it has done so. If the tape does not have a label, the message `Tape was unlabelled` appears.

Note: If the tape is not positioned at the beginning of a reel, T.RDLBL does not try to read the tape label, returning to the UniVerse system prompt. If the tape is positioned at the beginning of a logical tape file, it tries to read the label, but if T.RDLBL cannot find the label, it displays a message like `Tape was unlabelled.`

Use T.READ to read a tape record and then display it.

Syntax

T.READ [**MTU** [*mtu*]] [*options*]

Qualifiers

MTU	Specifies a tape drive. Use MTU if you have more than one drive assigned to you or if the assigned drive is not drive 0.
mtu	Indicates the mode (*m*), number of tracks (*t*), and tape unit number (*u*) of a tape drive. The default for these values, 000, indicates ASCII mode, 9-track tape, and unit number 0. T.READ ignores the track specification. See the MTU keyword in Chapter 2.

options can be any of the following:

LPTR	Prints tape records on the system printer.
HEX	Lists data in hexadecimal as well as character format.
FROM *n*	Reads the tape beginning at tape record *n* relative to the current position of the tape.
TO *n*	Stops reading after tape record *n*.

Description

If you manually rewind the tape, a subsequent T.READ does not reposition the tape to the beginning. It reads the tape starting at the position of the previous T.READ because UniVerse maintains its own internal tape position counters.

T.REW

Use T.REW to rewind a tape to the load point.

Syntax

T.REW [**MTU** [*mtu*]]

Qualifiers

MTU — Specifies a tape drive. Use MTU if you have more than one drive assigned to you or if the assigned drive is not drive 0.

mtu — Indicates the mode (*m*), number of tracks (*t*), and tape unit number (*u*) of a tape drive. The default for these values, 000, indicates ASCII mode, 9-track tape, and unit number 0. T.REW ignores the track specification. See the MTU keyword in Chapter 2.

Use T.SPACE to advance a specified number of files on the tape or to advance to the end-of-file mark. If the drive encounters an end-of-file mark before it advances over the specified number of records, the tape is positioned after the next end-of-file mark.

Syntax

T.SPACE [**MTU** [*mtu*]] [*n*]

Qualifiers

MTU	Specifies a tape drive. Use MTU if you have more than one drive assigned to you or if the assigned drive is not drive 0.
mtu	Indicates the mode (*m*), number of tracks (*t*), and tape unit number (*u*) of a tape drive. T.SPACE uses only the unit specification and ignores the mode and track specifications. See the MTU keyword in Chapter 2.
n	The number of files to space forward on the tape. If you do not specify *n*, T.SPACE displays a prompt requesting the number of files.

T.UNLOAD

Use T.UNLOAD to rewind a magnetic tape and unload the tape from the drive after you finish using it.

Syntax

T.UNLOAD [**MTU** [*mtu*]]

Qualifiers

MTU Specifies a tape drive. Use MTU if you have more than one drive assigned to you or if the assigned drive is not drive 0.

mtu Indicates the mode (*m*), number of tracks (*t*), and tape unit number (*u*) of a tape drive. The default for these values, 000, indicates ASCII mode, 9-track tape, and unit number 0. T.UNLOAD ignores the track specification. See the MTU keyword in Chapter 2.

Use T.WEOF to write an end-of-file mark on the tape at the current position.

Syntax

T.WEOF [**MTU** [*mtu*]]

Qualifiers

MTU Specifies a tape drive. Use MTU if you have more than one drive assigned to you or if the assigned drive is not drive 0.

mtu Indicates the mode (*m*), number of tracks (*t*), and tape unit number (*u*) of a tape drive. The default for these values, 000, indicates ASCII mode, 9-track tape, and unit number 0. T.WEOF ignores the track specification. See the MTU keyword in Chapter 2.

T.WTLBL

Use T.WTLBL to write a tape label in a format compatible with a Pick or REALITY system. The label is written at the current position of the tape. The label includes the time and date.

Syntax

T.WTLBL [**MTU** [*mtu*]] [*format*] [*text*]

Qualifiers

MTU — Specifies a tape drive. Use MTU if you have more than one drive assigned to you or if the assigned drive is not drive 0.

mtu — Indicates the mode (*m*), number of tracks (*t*), and tape unit number (*u*) of a tape drive. The default for these values, 000, indicates ASCII mode, 9-track tape, and unit number 0. T.WTLBL ignores the track specification. See the MTU keyword in Chapter 2.

format — Specifies the tape label format. It can be one of the following:

- PICK.FORMAT — The Pick tape format.
- INFORMATION.FORMAT — The Prime INFORMATION tape format. It is the same as the Pick tape format.
- REALITY.FORMAT — The Microdata REALITY tape format.

text — Specifies text to include in the tape label. *text* must be a single word. Do not enclose *text* in quotation marks. To include more than one word in text, separate the words with periods.

Description

Reel number is 01. Multireel tape handling has not yet been implemented.

Pick labels (including ADDS Mentor and Ultimate) are 80 bytes long and have the following format (❒ represents an ASCII blank, I represents an item mark, and F represents a field mark):

I L ❒ *xxxx* ❒ *HH*:*MM*:*SS*
❒ *DD* ❒ *MMM* ❒ *YYYY*
❒ *filename* ❒ *header pad* F *rr*

PICK.FORMAT

I	Item mark (segment mark)
L	ASCII character L
xxxx	Tape record size (hexadecimal)
HH:*MM*:*SS*	Time (external 24-hour)
DD MMM YYYY	Date (external form)
filename	Name of the file dumped
header	(Optional) Label header text
pad	Enough blanks to get to byte 78
F	Field mark (attribute mark)
rr	Reel number (hexadecimal)

REALITY labels are 78 bytes long and have the following format (❒ represents an ASCII blank, **I** represents an item mark, **F** represents a field mark, and **V** represents a value mark):

I L *header* **V** *HH*:*MM*:*SS*
❒ *DD* ❒ *MMM* ❒ *YYYY*
F *rr* **F** *xxxxx* **F I** *pad*

REALITY.FORMAT

I	Item mark (segment mark)
L	ASCII character L
header	(Optional) Label header text (<= 44 characters)
V	Value mark (follows L if no header)
HH:*MM*:*SS*	Time (external 24-hour)
DD MMM YYYY	Date (external form)
F	Field mark (attribute mark)
rr	Reel number (decimal)
xxxxx	Tape record size (decimal)
pad	Fill blanks up to 78 bytes

Example

The following example specifies text to include in a tape label:

```
>T.WTLBL SALES.JANUARY
```

TANDEM

Use TANDEM to display or control the input and output displayed on another user's terminal from your terminal. You must be a UniVerse Administrator logged in to the UV account to use TANDEM.

This command is not supported on Windows NT systems.

Syntax

TANDEM *terminal.no*

Qualifier

terminal.no The terminal number of the terminal whose activity you want to watch or control.

Description

TANDEM shows output only from UniVerse processes. You can use TANDEM in the following three modes: feed mode, message mode, and view mode.

Mode	Description
Feed	Lets you enter commands for another user on your terminal. If you enter data at the same time as the other user, your keystrokes are defined by the system implementation of the terminal driver.
Message	Lets you send text to another user's terminal. You cannot control the location or format of the characters displayed on the user's terminal. Data is not treated as input for the other user.
View	Default mode. Shows another user's input and output on your terminal. This display continues when you use message or feed mode.

While using TANDEM, you can change modes by entering an escape sequence (**Esc** followed by an action code). You can use any of the following sequences:

Sequence	Description
Esc D	Puts TANDEM in view mode. Terminates message or feed mode if active. Sends a BREAK to the other user's process.
Esc F	Puts TANDEM in feed mode. Terminates message mode if active.

Sequence	Description
Esc M	Puts TANDEM in message mode. Terminates feed mode if active.
Q	In view mode, same as **Esc X**. No effect in other modes.
Esc U	Same as **Esc D**.
Esc V	Puts TANDEM in view mode. Terminates message or feed mode if active.
Esc X	Ends the TANDEM session.
Esc Esc	In message mode or feed mode, lets you send **Esc** to another user's terminal.
Esc ?	Displays information on your terminal. Also displays the status information for the current session, such as the active mode.

To exit the TANDEM process, type **Q** then press **Return** at your terminal. It can take a moment for the process to quit.

A user's terminal number is the first number in the output of a WHO command.

Note: The COMO command does not capture output produced by TANDEM.

When you use TANDEM on a phantom process, you cannot use feed or message mode. To determine the number of the phantom process, use the PORT.STATUS command to show the pid of the job. Convert the hexadecimal value of the shared memory segment to a decimal value. Use this decimal value to watch the output of a phantom process. For example, the phantom process pid 23456 uses the shared memory segment hexadecimal value 0xaceba460. You can use the equivalent decimal value 42080 to watch the output of the phantom process.

When you finish watching the remote terminal, you cannot invoke TANDEM again until an I/O operation is performed from the remote terminal.

The feed mode for a TANDEM session is not supported on all platforms. The system displays a message in this case.

TERM

Use TERM to set or display printer and terminal characteristics. You can also use TERM to set the terminal type.

Syntax

TERM [*#1*, *#2*, *#3*, *#4*, *#5*, *#6*, *#7*, *#8*]

Qualifiers

#1 through *#8* are positional parameters. Each parameter is optional, but its position must be held by a comma.

#1	The line length of the terminal screen. The default is a page width of 79.
#2	The number of lines displayed on the terminal screen. The default is a page depth of 24.
#3	The number of lines skipped at the bottom of the screen. This number is subtracted from page depth (*#2*). The default is 0.
#4	A number indicating the amount of delay following a linefeed. The default is 0, or no delay. 1 is the least amount of delay; 7 is the most.
#5	A number indicating the amount of delay following a formfeed. The default is 2. Range is from 2 through 3.
#6	The ASCII number corresponding to the **Backspace** key. The default is 8.
#7	The number of characters per line on the line printer. The default is 132.
#8	The number of lines per page on the line printer. The default is 66.

Description

If you enter TERM with no qualifiers, TERM displays the current settings.

You can change the characteristics of print channel 0 or another print channel using SETPTR. The characteristics that you set using SETPTR override the printer characteristics that you set using TERM.

You can use HUSH and PTERM to change other characteristics of the terminal.

TERM assumes that the first nonnumeric parameter is a terminal type.

Examples

To set the number of characters per line, lines per screen, and lines per printer page, enter the following:

```
>TERM 40,22,,,,,33
```

To check the current settings, enter the following:

```
>TERM
            Terminal Printer

Page width:       79     132
Page depth:       24      66
Page skip :        0
LF delay  :        0
FF delay  :        2
Backspace :        0
icl6404
>
```

To set terminal type to wy50 (Wyse 50), enter the following:

```
>TERM wy50
>
```

TIME

Use TIME to display the current system time and date on your terminal. TIME uses a 24-hour clock.

Syntax

TIME

Example

```
>TIME
11:10:00 20 OCT 1995
>
```

Use UMASK to set who can read, write, and execute new files you create. You can also use UMASK to display the current file creation mask.

This command is not supported on Windows NT systems.

Syntax

UMASK [*nnn*]

Qualifier

nnn An octal number that specifies the file creation mask. If you do not specify a number, UMASK displays the current file creation mask.

Description

UMASK values are in octal format. The default value UMASK is 22. The default lets you read, write, and execute your files, and users can read and execute them.

Use the following list to choose the proper value for UMASK. Add the numbers for the permissions you do *not* want to grant for your files and use this number as the value of UMASK.

Octal Number	Permission
400	Owner can read file.
200	Owner can write to file.
100	Owner can execute file.
40	Group can read file.
20	Group can write to file.
10	Group can execute file.
4	Other can read file.
2	Other can write to file.
1	Other can execute file.

For example, if you want to be able to read, write, and execute your files and you want the members of your group to be able to execute them, but you do not want to allow any other access to your files, UMASK should equal 1+2+4+20+40, or 67.

Examples

```
>UMASK
Current UMASK is: 2

    OWNER           GROUP           OTHER
Read Writ Exec  Read Writ Exec  Read Writ Exec
  ON   ON   ON    ON   ON   ON    ON  OFF   ON
```

To change the file creation mask, enter the following:

```
>UMASK 67
```

This is what the file creation mask looks like when UMASK=67:

```
>UMASK
Current UMASK is: 67

    OWNER           GROUP           OTHER
Read Writ Exec  Read Writ Exec  Read Writ Exec
  ON   ON   ON   OFF  OFF   ON   OFF  OFF  OFF
```

Use UNASSIGN to release a peripheral device from your control.

Syntax

UNASSIGN *device*

Qualifier

device The device that you want to unassign. *device* must be defined in the &DEVICE& file.

Description

While the device is assigned to you, no one else can use it. UNASSIGN releases a device so that it becomes available to other users. You can unassign a device that has been assigned to your exclusive use from your terminal. If you are using UNASSIGN at your terminal, you must be at the same terminal where you assigned the device.

When you log out or quit and you have devices that are still assigned to you, UniVerse automatically unassigns them.

For more information, see &DEVICE&.

UNLOCK

Use UNLOCK to clear file, group, and update record locks. You must be a UniVerse Administrator logged in to the UV account to execute UNLOCK.

Syntax

UNLOCK [**NODE** *node*] [**USER** *user.number*]
[**FILE** *pathname* | [**DEVICE** *device.number*] [**INODE** *i.node.number*]]
[**GROUP** *group.address*] [**RECORD** *record.ID*]
{ **FILELOCK** | **GROUPLOCK** | **READULOCK** | **READLLOCK** |
ALL }

Qualifiers

NODE *node*	Restricts lock removal to the specified node. **UNIX.** This must be the network node number, which is the last part of the TCP/IP host number specified in the */etc/hosts* file. **Windows NT.** If valid for Windows NT, the path of the *hosts* file is /Windows/*System32*/*Drivers*/*etc*/*hosts* where Windows is the Windows NT installation directory. On Windows NT systems, you can also use the LAN Manager node name.
USER *user.number*	Restricts lock removal to locks owned by the specified user. You can get the user number from the output of LIST.READU.
FILE *pathname*	Restricts lock removal to a file or device specified by the pathname. You cannot specify DEVICE or INODE clauses in an UNLOCK statement that uses the FILE clause.
DEVICE *device.number*	Restricts lock removal to a file or a device specified by the device number.
INODE *i.node.number*	Restricts lock removal to a file or a device specified by the i-node number.
GROUP *group.address*	Restricts lock removal to the group specified by *group.address*. The group address appears on the LIST.READU report.

RECORD *record.ID*	Restricts lock removal to the record specified by the record ID.

Specify the lock type as one of the following:

FILELOCK	Removes only file locks.
GROUPLOCK	Removes only group locks and update record locks associated with the group.
READULOCK	Removes only update record locks.
READLLOCK	Removes only shared record locks.
ALL	Removes all locks.

Description

You can specify ID numbers (that is, the node number, device number, or record ID) in either decimal or hexadecimal format. Precede the number with 0x to specify it as hexadecimal.

UNLOCK SEMAPHORE

Use UNLOCK SEMAPHORE to unlock system semaphores. You must be a UniVerse Administrator logged in to the UV account to use the command UNLOCK SEMAPHORE.

Syntax

UNLOCK { **FILELOCK** | **GROUPLOCK** | **READULOCK** } **SEMAPHORE** *n*

UNLOCK { **TLOGLOCK** | **T30LOCK** | **PSTATLOCK** | **LOGINLOCK** } **SEMAPHORE**

When you use the first syntax, you must specify the semaphore type and the semaphore number.

Qualifiers

n	The semaphore number associated with a lock. The number can be from 1 through the total number of semaphores on the system. The number of semaphores on the system appears in the *uvconfig* file. The FSEMNUM is the number of file lock semaphores, and the GSEMNUM is the number of group lock semaphores. The semaphore number appears in the Lmode column of the LIST.READU report.
FILELOCK	Releases the specified concurrency control semaphores that control access to the file lock table.
GROUPLOCK READULOCK	Releases the specified concurrency control semaphores that control access to the group lock table. The semaphore types GROUPLOCK and READULOCK are the same because both are controlled by the group lock table. Shared record locks are also in the group lock table.
TLOGLOCK	Releases the transaction logger semaphore.
T30LOCK	Releases the semaphore that gives access to dynamic file information in the shared memory segment.
PSTATLOCK	Releases the PORT.STATUS semaphore.
LOGINLOCK	Releases the login semaphore.

Description

UNLOCK SEMAPHORE is not available on all systems. It is designed only for systems whose semaphores are implemented in assembly language.

You can specify the semaphore number in either decimal or hexadecimal format. Precede the number with 0x to specify it as a hexadecimal.

UPDATE.ACCOUNT

Use UPDATE.ACCOUNT to update the contents of your VOC file. UPDATE.ACCOUNT replaces records in your VOC file with records in the system's NEWACC file.

Syntax

UPDATE.ACCOUNT [PIOPEN | PICK | NEWACC | IN2 | INFORMATION | REALITY]

Description

The optional arguments PIOPEN, PICK, NEWACC, IN2, INFORMATION, and REALITY let you change the flavor of your account.

When the UniVerse Administrator creates a new UniVerse account, UniVerse uses information in the NEWACC file to build the account's VOC file. As you use the account to create files, sentences, paragraphs, and other items, your VOC file changes. None of the items you create in your account appear in the NEWACC file.

However, when the UniVerse software changes (for example, when a new release is installed), your VOC file needs to be updated for records that should be the same in your VOC and in NEWACC.

When you first log in to your UniVerse account after a new release has been installed, UniVerse tells you that your VOC file is not current and asks if you want to update the account. You can copy items from the NEWACC file to your VOC file by entering **Y**. UniVerse does not delete any VOC entries that you have added.

When you modify the VOC file, you might create a record with the same name as a new record in the NEWACC file. When UniVerse updates the account, it uses the file &TEMP& to save any record in your VOC file that differs from a record with the same name in NEWACC. You can inspect and retrieve these records after you update your account.

Use the VVOC command to find out if your account is up-to-date.

Use UPDATE.INDEX to update the secondary indices of a file, delayed by the DISABLE.INDEX command.

Syntax

UPDATE.INDEX [**DICT**] [*filenames*]

Qualifiers

DICT	Specifies the file dictionary.
filenames	The names of UniVerse files whose indices you want to update. If you do not specify *filenames*, UPDATE.INDEX prompts for one.

Description

You can use UPDATE.INDEX when automatic updating is enabled or disabled. Automatic updating is initially enabled. After disabling it, you can use ENABLE.INDEX to reenable automatic indexing. Note that enabling automatic updating does not update the index entries; use UPDATE.INDEX for this.

Reports generated from files while automatic updating is disabled can contain incorrect information. Records added cannot be accessed using a secondary key; records deleted can still be accessed using a secondary key; and records modified can be associated with the wrong secondary key.

Once automatic updating is disabled, do the following to ensure that the indices are completely up-to-date:

1. Reenable automatic updating using ENABLE.INDEX.
2. Close all opened versions of the file system-wide, even if they are reopened immediately. This step ensures that no users are still operating with automatic updating disabled.
3. Issue UPDATE.INDEX to bring the indices up-to-date.

UPDATE.INDEX does not enable automatic updating.

Use LIST.INDEX to display the updating status of an index.

usa

Use *usa* for general spooler administration. Use *usa* from a UNIX shell. You must be a UNIX superuser to use all options except *–A*, *–H*, *–j*, *–p*, *–s*, and *–S*. Members of printer groups can also use the *–F*, *–a*, *o*, and *q* options. If you specify no options, *–s* is assumed.

This command is not supported on Windows NT systems.

Syntax

usa [**–p** *printer*] [**–F** *formname* [**–a** [**+***number* | *pathname*]]] [**–A**] [**–b**] [**–c**] [**–C**] [**–g**] [**–H**] [**–j**] [{ **–** | **+** } **L**] [{ **–** | **+** } **o**] [**–P**] [{ **–** | **+** } **q**] [**–r**] [**–R**] [**–s**] [**–S**] [**–z**]

Qualifiers

–p	If you do not specify the *–p* option, *usa* assumes all printers.
–F	Mounts form *formname* on *printer*.
–a	Used with the *–F* and *–p* options, *–a* verifies the alignment of *printer*. If the argument to *–a* is *+number*, *usa* uses the *number* of lines of the first waiting job of that form. If the argument is *pathname*, *usa* uses data in the file *pathname* for verification. *pathname* must be the file's absolute UNIX pathname. After printing an alignment test, *usa* asks if you want to repeat the test. To reprint the alignment test, enter **n** at the prompt.
–A	Lists the status of spooler queues, displaying only active print jobs.
–b	Stops printing the current job (does not kill).
–c	Restarts printing of the current job.
–C	Resets the job ID number to 0 (zero).
–g	Defines a printer group.
–H	Displays a short help message.
–j	Lists queued print jobs.
{–|+} L	Disables (–) or enables (+) spooler logging to the *err.log* and *act.log* files.
{–|+} o	Disables (–) or enables (+) printing.
–P	Suppresses automatic pagination.

{– | +} q	Disables (–) or enables (+) queuing.
–r	Resets printer configuration.
–R	Simulates a crash restart by resetting the spooler daemon and rereading the *sp.config* and *usplog* files. After reading *usplog*, *usa* restores information about the spool queue to its precrash state. If changes were made to *sp.config*, *usa* deletes information about the spooler queue.
–s	Lists the status of spooler queues.
–S	Lists the status of spooler queues, displaying only the queues containing print jobs (active and inactive).
–z	Shuts down the spooler.

usd

Use *usd* to start up the spooler daemon. Use *usd* from a UNIX shell. The *usd* command requires superuser privileges.

This command is not supported on Windows NT systems.

Syntax

usd [*directory*] [**–a** *filename*] [**–e** *filename*] [**–L**] [**–t**] [**–w** *seconds*]

Qualifiers

directory	The name of the spooler directory. If you do not specify *directory*, the daemon uses *usr/spool/uv* as the spooler directory.
–a	Creates a new spooler activity logging file with the name *filename*. *filename* must be the full pathname of the activity logging file.
–e	Creates a new spooler error logging file with the name *filename*. *filename* must be the full pathname of the error logging file.
–L	Creates default activity and error logging files *err.log* and *act.log* in the spooler directory (*/usr/spool/uv*).
–t	Specifies that jobs be processed in first-in, first-out order.
–w	Specifies the number of *seconds* the spooler should wait on UNIX system calls such as open and device setup calls. If the operating system does not return from these calls, the spooler waits for the specified number of seconds before it disables the printer and goes on to the next printer. The default value is 10 seconds.

Description

If you specify no options, *usd* creates no log files, and jobs are processed in order by size (smaller jobs are processed before larger).

The spooler daemon uses two files during startup, *sp.config* and *usplog*. The *sp.config* file contains printer definitions. The *usplog* file contains the image of the last queue state, which is used to rebuild the queue after a crash. At startup time the spooler daemon looks for these files in the default directory (usually */usr/spool/uv*). If you specify *directory* in the *usd* command at startup time, the spooler daemon looks for *sp.config* and *usplog* in the specified directory, and the *usp* command spools print files to the specified spooler directory.

You can spool files from within UniVerse to a directory other than */usr/spool/uv*.

Use USERS to display the number of users currently logged in to the system.

Syntax

USERS

Example

```
>USERS
There are currently 7 users logged on the system.
>
```

usm

Use *usm* to alter the specification of a job already in the printer queues. Use *usm* from a UNIX shell.

This command is not supported on Windows NT systems.

Syntax

usm [**–B** [**L**] *string* [**–E** [**L**] *string* [**–F***formname*] [**–h**] [**–H**] [**–k**]
[**–n***copies*] [**–p***printer*] [**–P***priority*] [**–q**] [**–r**] [**–t***delay*]
[**–x** *n* [*–m*]] [**–y** *n* [*–m*]] *jobnum* | **all**

Qualifiers

–B Begins printing from the first character of *string*. If *string* contains blanks, enclose the entire string in quotation marks.

–BL Begins printing at the line containing *string*. If *string* contains blanks, enclose the entire string in quotation marks.

–E Ends printing at the last character of *string*. If *string* contains blanks, enclose the entire string in quotation marks.

–EL Ends printing at the line containing *string*. If *string* contains blanks, enclose the entire string in quotation marks.

–F Changes the form to *formname*.

–h Changes the job status to HOLD (that is, make the print file a hold file). Holds the job only until releasing it for printing.

–H Displays a short help message.

–k Kills a print job.

–n Changes the number of copies to *copies*.

–p Moves a print job to the queue for printer *printer*.

–P Changes priority to *priority*.

–q Retains the print job as a hold file after printing. Retains the job as a hold file even after releasing it for subsequent printing.

–r Prints a hold file.

–t Changes the relative or absolute time *delay* when to print. You can specify delays in the following formats:

Syntax	Example
+*minutes*	+5
+*hours* : *minutes*	+2:15
+*days.hours* : *minutes*	+7.00:00
hour : *minute*	12:00
day[.*hour* : *minute*]	15.12:00
month.day[.*hour* : *minute*]	6.15.12:00
year.month.day[.*hour* : *minute*]	95.6.15.12:00

–x Prints page *n* or pages *n–m*.

–y Prints line *n* or lines *n–m*.

jobnum Specifies the print job number.

all Specifies all print jobs belonging to the user.

usp

Use *usp* to submit a print job to the spooler. Use *usp* from a UNIX shell.

This command is not supported on Windows NT systems.

Syntax

usp [**–B** [**L**] *string* [**–C** *classtext*] [**–e**] [**–E** [**L**] *string* [**–f**] [**–F** *formname*] [–**h**] [**–H**] [**–J** *jobtext*] [**–l**] [**–n** *copies*] [**–p** *printer*] [**–P** *priority*] [–**q**] [–**Q**] [–**r**] [**–s**] [**–t** *delay*] [**–x** *n* [–*m*]] [**–y** *n* [–*m*]] *files*

Qualifiers

–B Begins printing from the first character of *string*. If *string* contains blanks, enclose the entire string in quotation marks.

–BL Begins printing at the line containing *string*. If *string* contains blanks, enclose the entire string in quotation marks.

–C Prints *classtext* in banner line 3.

–e Suppresses the end-of-job page eject.

–E Ends printing at the last character of *string*. If *string* contains blanks, enclose the entire string in quotation marks.

–EL Ends printing at the line containing *string*. If *string* contains blanks, enclose the entire string in quotation marks.

–f Source file contains FORTRAN forms control codes.

–F Waits until form *formname* is mounted on the printer.

–h Suppresses printing of the banner page.

–H Displays a short help message.

–J Prints *jobtext* in banner line 2.

–l Prints sequential line numbers.

–n Prints the number of copies specified by *copies*.

–p Routes to *printer* instead of to the default printer.

–P Sets *priority* other than default.

–q Retains the print job as a hold file after printing. Retains the job as a hold file even after releasing it for subsequent printing.

–Q Sets the job status to HOLD (that is, makes the print file a hold file). Holds the job only until releasing it for printing.

–r Removes the source file when done.

–s Uses a symbolic link.

–t Specifies a relative or absolute time delay when to print. You can specify delays in the following formats:

Syntax	Example
+*minutes*	+5
+*hours* : *minutes*	+2:15
+*days.hours* : *minutes*	+7.00:00
hour : *minute*	12:00
day[.*hour* : *minute*]	15.12:00
month.day[.*hour* : *minute*]	6.15.12:00
year.month.day[.*hour* : *minute*]	95.6.15.12:00

–x Prints page *n* or pages *n–m*.

–y Prints line *n* or lines *n–m*.

files The UNIX pathnames of the files to be sent to the spooler. *usp* sends multiple files separated by spaces to the spooler as one job with continuous pagination.

uv

Use *uv* to enter the UniVerse environment from an operating system command prompt.

Syntax

uv

Description

If the directory you are working in is not set up as a UniVerse account, the following message appears:

```
This directory is not set up for UniVerse.
Would you like to set it up (Y/N)?
```

Enter **Y** to create a UniVerse account. UniVerse creates the necessary files, and you enter the UniVerse environment.

Enter **N** to quit and reenter the operating system environment.

Use UV.LOGIN to initialize all UniVerse account environments.

Syntax

UV.LOGIN

Description

The UV.LOGIN entry in the VOC file of the UV account defines a sequence of commands that are executed in any UniVerse account when any user logs in to it. For example, you might include specifying default printer settings, enabling phantom notification, or changing date formats. If the UV.LOGIN entry exists, it is executed before the LOGIN entry in the VOC file of the account.

When UniVerse is first installed, the UV account's VOC file does not contain a UV.LOGIN entry. You can create or change a UV.LOGIN entry in the UV account at any time, UniVerse searches for this entry and executes it when any user invokes UniVerse and when users log in to any UniVerse account. The UV.LOGIN entry must be a sentence, a paragraph, a menu, a proc, a BASIC program, a verb, or a remote pointer to one of these.

The UV.LOGIN entry is not executed when users log to a UniVerse account by executing a LOGTO or CHDIR command.

If you do not want a phantom to execute the UV.LOGIN entry, you must add a test to the UV.LOGIN entry for `@TTY = 'phantom'`. For example, if a phantom executes a UV.LOGIN paragraph containing the following IF statement, the IF statement exits the UV.LOGIN paragraph:

```
IF @TTY = 'phantom' THEN GO END.OF.UV.LOGIN
```

Put commands that phantoms should not execute in the last section of the UV.LOGIN paragraph. The last line of the UV.LOGIN paragraph must be the following label:

```
END.OF.UV.LOGIN:
```

UNIX. If you want UniVerse process with a single command parameter, such as `uv "UPDATE.MASTER"`, you can choose to avoid executing the UV.LOGIN entry. Use the @tty test just described, and have the process direct standard input, standard output, and standard error to nonterminal devices. You can execute this example from a Bourne shell:

```
uv "UPDATE.MASTER" </dev/null > /dev/null 2>&1
```

Example

```
UV.LOGIN
0001: PAragraph to be executed in all UniVerse accounts
0002: * Disable interupt
0003: BREAK OFF
0004: * Clear screen
0005: CS
0006: * Dispay general message to all users
0007: DISPLAY MESSAGE TO ALL EMPLOYEES:
0008: DISPLAY Today at noon in the cafeteria, everyone is
0009: DISPLAY to come on down and enjoy pizza and tonic,
0010: DISPLAY generously supplied by the marketing department.
0011: * Pause for a bit
0012: SLEEP 20
0013: * Run security program that updates security files
0014: RUN SECURITY.BPS USER.STATUS
0015: DATA "LOGIN"
0016: * Set default printer settings
0017: SETPTR ,,,,,,FORM LEGAL,AT MARKETING NOEJECT,BRIEF
0018: * Set autologout if no activity
0019: AUTOLOGOUT 20
0020: * Enable interrupt
0021: BREAK ON
0022: * End of commands
0023: END.OF.UV.LOGIN:
```

Use UV.VI to invoke the UNIX editor, *vi*, using UniVerse file-naming syntax. This is useful for type 1 files whose records have names longer than 14 characters. You can also use UV.VI to invoke *vi* on records in hashed files.

This command is not supported on Windows NT systems.

Syntax

UV.VI [**DICT**] *filename* [*records* | *]

Qualifiers

DICT	Specifies that you want to edit records in the file dictionary.
filename	The name of an existing file.
records	The names of records you want to edit. Separate multiple record IDs with spaces. You can also use an active select list.
*	Specifies all records in the file.

Description

If you enter only **UV.VI *filename***, UniVerse prompts for a record name.

If you use UV.VI after using SAVE.LIST, UV.VI locks each record in the select list.

Example

To edit the program RECEIVABLES in the file BP, enter the following:

```
>UV.VI BP RECEIVABLES
```

uvbackup (UNIX)

Use *uvbackup* from an operating system shell to save specified files on a daily, weekly, or comprehensive basis. You can specify files on the command line or from standard input. Output from *uvbackup* goes to standard output. For access to all system, UniVerse, and SQL files, you must be a UniVerse Administrator.

Syntax

uvbackup { **–d** | **–w** | **–f** } [**–b** *blksize*] [**–l** "*labeltext*"] [**–rev7**] [**–rev8**]
[**–s** *file*] { [**–t** *device*] … } [**–v** | **–V**] { **–** | *pathnames* }

Qualifiers

Specify each option separately, and precede each option with a hyphen.

–d (Daily) Backs up records in specified UniVerse hashed files that have been added or changed since the last full, weekly, or daily *uvbackup*.

–w (Weekly) Backs up records in specified UniVerse hashed files that have been added or changed since the last full or weekly *uvbackup*. Weekly backups back up any records that have already been backed up with the *–d* option.

–f (Full) Backs up all specified UniVerse and operating system files.

–b Specifies the block size in increments of 512 bytes. The default is 8192. Minimum is 512, maximum is defined by the configurable parameter BLKMAX.

–l Specifies *labeltext* of up to 80 characters to identify the backup. You must enclose *labeltext* in quotation marks. All characters are valid. *uvbackup* writes this text in the user label portion of the Backup Image Header.

–rev7 Produces a backup in a format suitable for restoring to UniVerse Release 7.

–rev8 Produces a backup in a format suitable for restoring to UniVerse Release 8.

–s Specifies a file to which screen output is captured. You must also specify the *–v* or *–V* option to use *–s*.

–t	Specifies the device to which to write backup data. *device* can be either a pathname or an entry in the &DEVICE& file. Use multiple *–t* options to specify up to 10 devices. *uvbackup* writes to the first device specified, then the second, and so on.
–v	Displays pathnames. *uvbackup* displays all pathnames of files as they are backed up. If there is an error, a message describing the problem appears.
–V	Displays pathnames and record IDs. *uvbackup* displays all pathnames of files and, for UniVerse hashed files, record IDs as they are backed up. If there is an error, a message describes the problem.
–	Reads pathnames from standard input.
pathnames	List of files to back up. Each filename must be the pathname of the file.

Description

uvbackup backs up files specified by *pathnames*. This means you must explicitly specify each data file, file dictionary, and secondary index you want to back up. Specify the pathnames of file dictionaries in the format D_*filename*. Specify the pathnames of secondary indices in the format I_*filename*/*.

Examples

These examples show how the *find* command specifies the files you want to back up.

This example backs up all directories and files on the system. The slash (/) specifies the root directory and all its dependencies. The *–f* option specifies a full backup. The *–v* option lists pathnames of directories and files as they are backed up. The *–l* option specifies tape label text. The – option takes input from standard input. The files are backed up on to the tape drive attached to the device file */dev/rmt/0*.

```
$ find / -print | uvbackup -f -v -l "FULL SYSTEM BACKUP" - > /dev/rmt/0
```

The next example backs up records that have changed in all UniVerse hashed files in the */usr/work* directory and its dependencies. The *–b* option sets a block size of 512 bytes. The *-t* option specifies MT0 as the device to write to as defined in the &DEVICE& file.

```
$ find /usr/work -print | uvbackup -d -v -b 512 -t MT0
```

The next example backs up records that have changed in all UniVerse hashed files in the current directory and its dependencies. The –*V* option lists record IDs as well as pathnames of directories and files as they are backed up. The – option takes input from standard input.

```
$ find . -print | uvbackup -w -V - > /dev/rmt/0
```

Use *uvbackup* from an operating system shell to save specified files on a daily, weekly, or comprehensive basis. You can specify files on the command line or from a command file. Output from *uvbackup* goes to standard output, or to the specified tape device. For access to all system, UniVerse, and SQL files, you must be a UniVerse Administrator.

Syntax

uvbackup {**–d** | **–w** | **–f**} [**–b** *blksize*] [**–l** "*labeltext*"] [**–v** | **–V**]
[*pathnames*] [**–cmdfil** *filename*] [**–t** *device*]

Qualifiers

Specify each option separately, and precede each option with a hyphen.

–d	(Daily) Backs up records in specified UniVerse hashed files that have been added or changed since the last full, weekly, or daily *uvbackup*.
–w	(Weekly) Backs up records in specified UniVerse hashed files that have been added or changed since the last full or weekly *uvbackup*. Weekly backups back up any records that have already been backed up with the *–d* option.
–f	(Full) Backs up all specified UniVerse and operating system files.
–b	Specifies the block size in increments of 512 bytes. The default is 8192. The minimum is 512, and the maximum is defined by the tunable parameter BLKMAX.
–l	Specifies *labeltext* of up to 80 characters to identify the backup. You must enclose *labeltext* in quotation marks. All characters are valid. *uvbackup* writes this text in the user label portion of the Backup Image Header.
–v	Displays pathnames. *uvbackup* displays all pathnames of files as they are backed up. If there is an error, a message describing the problem appears.
–V	Displays pathnames and record IDs. *uvbackup* displays all pathnames of files and, for UniVerse hashed files, record IDs as they are backed up. If there is an error, a message describes the problem.

pathnames	The pathnames of the files to back up.
–cmdfil *filename*	Specifies a command file that contains a list of filenames to back up. Each filename should be on a separate line in the command file.
–t *device*	Specifies that the output is directed to the named tape device. *device* is the device number specified in &DEVICE&, for example, MT0.

Description

uvbackup backs up files specified on the command line or in a command file. You must explicitly specify each data file, file dictionary, and secondary index you want to back up. Pathnames of file dictionaries have the form D_*filename*. Pathnames of secondary indices have the form I_*filename*.

Examples

This example backs up all the files contained in a command file called *filelist*:

```
$ uvbackup -f -v -l "FULL SYSTEM BACKUP" -cmdfil filelist -t MT0
```

This example backs up the two files specified on the command line. The *–b* option specifies a block size of 512 bytes.

```
$ uvbackup -b 512 -f -v -t MT0 "d:\usr\work\file1" "d:\usr\work\file2"
```

Use *uvdlockd* to administer the deadlock daemon. You must be a UniVerse Administrator to use *uvdlockd*.

Syntax

uvdlockd { [**–t** *time*] [**–r** *resolution*] [**–l** *location*] } | [**–query**] | [**–stop**] | [**–v** *victim*]

Qualifiers

–t *time* — The time interval (in seconds) between the deadlock daemon's successive checks of the lock-waiter tables. The default is 60 seconds.

–r *resolution* — The resolution strategy the deadlock daemon uses. It can be one of the following:

- 0 Selects a transaction at random. This is the default.
- 1 Selects the newest transaction.
- 2 Selects the transaction with the fewest number of locks held.

–l *location* — The location of the deadlock log file. The default is uvhome*/uvdlockd.log*.

–query — Generates a report based on a one-shot analysis of the lock-waiter tables and any detected deadlocks.

–stop — Shuts down the deadlock daemon.

–v *victim* — Specifies which user number to select as the process to abort.

Description

You can use the *uvdlockd* command to automatically identify and resolve deadlocks as they occur, or you can manually fix a deadlock by selecting and aborting one of the deadlocked user processes.

Resolving Deadlocks Automatically. The deadlock daemon automatically resolves deadlocks by creating and updating a set of lockwaiter tables, which represent the state of the locking and transactional system. These tables are continually examined for evidence of a deadlock. Once the daemon detects a deadlock, it selects one of the currently involved transactions to abort, removing the deadlock.

The deadlock daemon notifies the selected transaction that a deadlock has occurred and aborts the current execution layer. This rolls back any active transactional statements and cleans up any remaining locks.

Resolving Deadlocks Manually. You can resolve deadlocks manually using the *–query* option to check for deadlocks, then using the *–v* option to select a deadlock user process to abort.

Examples

This example starts the deadlock daemon, setting it to check for deadlocks every two minutes and defining the automatic resolution strategy to select the newest transaction to abort. The default deadlock log file is used.

```
$ uvdlockd -t 120 -r 1
```

The next example uses the *–query* option to generate a report of the lock-waiter tables and the detected deadlocks:

```
$ uvdlockd -query

User 49 is waiting for
user 33 who is waiting for
user 49.
```

The next example uses the *–v* option to select user process 49 to abort:

```
$ uvdlockd -v 49
```

Use *uvfixfile* to verify the integrity of UniVerse hashed files, report file statistics, and repair broken files. Use *uvfixfile* from an operating system command prompt. You must be a UniVerse Administrator to repair files.

Syntax

uvfixfile –f[**ile**] *pathname* [**–b**[**rief**]] [**–case** *setting*] [**–dec**] [**–fix**]
[**–help**] [**–hex**] [**–i**] [**–l**[**og**] [*logfile*]] [**–m**[**ap**]]
[**–o**[**utput**] [*outfile*]] [**–rev**] [**–s**[**tats**]] [**–t**[**race**] *groups*]
[**–v**[**level**] *level*] [**–z**[**ero**] *groups*] [**–zgroup** *groups*]

Qualifiers

–f[ile]	Specifies relative or absolute *pathname* of the file you want to process.
–b[rief]	Displays brief error messages.
–case *setting*	Sets the case for interactive mode. *setting* can be **invert** or **noinvert**.
–dec	Sets the default base to decimal.
–fix	Fixes the specified file.
–help	Displays a list of available options.
–hex	Sets the default base to hexadecimal.
–i	Uses interactive mode. See "Interactive Mode" for a list of commands you can use in interactive mode.
–l[og]	Dumps errors to *logfile* instead of to standard error. If you do not specify *logfile*, *uvfixfile* creates a file called *uvfixlog* in the current directory.
–m[ap]	Maps the primary buffer and overflow buffer layout.
–o[utput]	Records all output, including errors, to *outfile*. If you do not specify *outfile*, *uvfixfile* creates a file called *uvfixout* in the current directory.
–rev	Displays the *uvfixfile* revision number.

–s[tats] Displays file statistics.

–t[race] Limits *groups* processed. *groups* can be one of the following:

n	Specifies one group.
n–m	Specifies a range of groups.
n+	Specifies a range of groups starting with *n* and ending at the end of the file.
all	Specifies all groups.

If you specify the *–i* option along with the *–t* option, *–t* is ignored.

–v[level] Sets the verbosity level of error messages. *level* can be a number from 0 through 9. See "Verbosity Levels" for a list of levels.

–z[ero] Resets one or more group buffers. *groups* are the same as the options listed under the *–t* option.

–zgroup Same as *–z*.

Description

uvfixfile traces through a file's groups, identifies problem groups, and reports their location to standard error. If you specify the *–fix* option, *uvfixfile* repairs most damaged files. However, *uvfixfile* cannot detect certain file breaks, and therefore it cannot fix them.

To invoke *uvfixfile* in the UniVerse environment, use the UVFIXFILE command.

Verbosity Levels. You can set the verbosity level of error messages from the command line, in interactive mode, and in step mode. *level* is a number from 0 through 9.

Level	Display
0	Errors only
1	Diagnostic messages and errors
2	Diagnostic messages, errors, and number of group buffer being processed

Level	Display
3	Diagnostic messages, errors, number of group buffer being processed, and group statistics
4	Diagnostic messages, errors, number of group buffer being processed, group statistics, and record header information, including the address of the current record block, forward link, backward link, and flagword (displayed in hexadecimal format)
5	Diagnostic messages, errors, number of group buffer being processed, group statistics, record header information, and meaning of bits set in each flagword
6	Diagnostic messages, errors, number of group buffer being processed, group statistics, record header information, meaning of bits set in each flagword, and record ID
7	Diagnostic messages, errors, number of group buffer being processed, group statistics, record header information, meaning of bits set in each flagword, record ID, and data record
8	Record ID only
9	Record ID and data record only

Interactive Mode. When you use the *–i* (interactive) option, the interactive mode prompt (:) appears. You can use the following commands in interactive mode:

!*command*	Runs operating system *command.*
?	Displays available interactive mode commands with a brief description of each.
akpath [*pathname*]	Changes the pathname of the file's secondary indices (alternate keys) to *pathname*. If you do not specify *pathname*, displays the current pathname of the file's secondary indices. To set the secondary indices path to an empty string, specify *pathname* as NULL.
case *setting*	Sets input case. *setting* can be **invert** or **noinvert**.
ex[it]	Exits *uvfixfile* (same as quit).
file *pathname*	Opens a file specified by *pathname.*
gl	Sets group locks while tracing.

group.lock	Same as gl.
hash *record.ID*	Displays the group to which *record.ID* hashes.
help	Displays available interactive mode commands with a brief description of each.
locks	Displays if group locks will be set.
m[ap] *n*	Maps the primary buffer and overflow buffer layout.
n[ext]	Gets the next file in a select list.
nl	Does not set group locks while tracing.
no.lock	Same as nl.
open *pathname*	Opens a file specified by *pathname*.
q[uit]	Exits *uvfixfile* (same as exit).
rev[ision]	Displays the *uvfixfile* revision number.
set {dec | hex}	Sets the default base to decimal (**dec**) or hexadecimal (**hex**).
stats	Displays file statistics.
s[tep] *group#*	Steps through one group buffer one record block at a time. See "Step Command" for a list of commands you can use when stepping through a group.
t[race] *groups*	Traces through one or more groups. *groups* can be the number of one group, a range of groups, a starting group number followed by a **+** (continues to the end of the file), or **all**.
uvfile *filename*	Opens a new file using the VOC entry.
v[level] [*n*]	Sets the verbosity level. *n* is a number from 0 through 9. If you do not specify *n*, *uvfixfile* displays the current verbosity level. See "Verbosity Levels" for a list of levels.
z[ero] *groups*	Resets one or more group buffers. *groups* can be the number of one group, a range of groups, a starting group number followed by a **+** (continues to the end of the file), or **all**.
zgroup *groups*	Same as z.

Step Command. You can use the step command only when you are in interactive mode. When you enter the step command, the step prompt (`step>`) appears. You can enter the following commands at the step prompt:

?	Displays available step commands.

Return	Displays the next record block.
c[ont]	Switches to trace mode and displays the rest of the group.
f[wd]	Displays the next record block.
h[elp]	Displays available step commands.
q[uit]	Quits, and redisplays the interactive mode prompt (:).
set *parameter*	Sets various record block parameters. See "Set Command" for a list of parameters you can set.
v[level] *n*	Sets the verbosity level to *n*. *n* is a number from 0 through 9. See "Verbosity Levels" for a list of levels.

Set Command. You can use the set command only when you are in step mode. You can set any of the following parameters:

bckupflg	Sets the backup flag.
blink [*value*]	Changes the backward link.
dec	Changes default base to decimal.
flagword [*value*]	Changes the flagword.
flink [*value*]	Changes the forward link.
freeflag	Marks the record block as free.
grpresiz	Sets the relocated group bit.
hex	Changes default base to hexadecimal.
ovflwbuf	Sets the oversize buffer bit.
ovflwchn	Sets the oversize change bit.
padinrec	Sets the record block padding flag.
t30first	Sets the dynamic file t30first bit.
t30lastb	Sets the dynamic file t30lastb bit.
transflg	(Obsolete) Sets transflg.
usenewpd	Sets the new style item padding flag.

UVFIXFILE

Use UVFIXFILE to verify the integrity of UniVerse hashed files, report file statistics, and repair broken files. You must be a UniVerse Administrator to repair files.

Syntax

UVFIXFILE [[**DICT**] *filename* | [**PATH**] *pathname*] [**BRIEF**] [**CASE** *setting*]
[**DECIMAL**] [**FIX**] [**HELP**] [**HEXADECIMAL**] [**I**]
[**LOG** *logfile*] [**MAP**] [**OUTPUT** *outfile*] [**REVISION**] [**STATS**]
[**TRACE** *groups*] [**VLEVEL**] *level*]] [{**ZERO** | **ZGROUP**} *groups*]

Qualifiers

DICT
: Specifies the file dictionary of *filename*.

filename
: The name of a UniVerse file as defined in the VOC file. *filename* must be the first option on the command line. If a select list is active, you need not specify *filename*.

PATH
: Specifies the relative or full *pathname* of the file you want to process. The PATH option must be the first option on the command line. If a select list is active, you need not use the PATH option. PATHNAME is a synonym for PATH.

BRIEF
: Displays brief error messages. You can also use B to specify this option.

CASE *setting*
: Sets the case for interactive mode. *setting* can be INVERT or NOINVERT.

DECIMAL
: Sets the default base to decimal. DEC is a synonym for DECIMAL.

FIX
: Fixes the specified file. You must be a UniVerse Administrator to repair files.

HELP
: Displays a list of available options.

HEXADECIMAL
: Sets the default base to hexadecimal. HEX is a synonym for HEXADECIMAL.

I
: Uses interactive mode. See "Interactive Mode" for a list of commands you can use in interactive mode.

LOG	Dumps errors to *logfile* instead of to standard error.
MAP	Maps the primary buffer and overflow buffer layout. You can also use M to specify this option.
OUTPUT	Records all output, including errors, to *outfile*.
REVISION	Displays the *uvfixfile* revision number. REV is a synonym for REVISION.
STATS	Displays file statistics. You can also use S to specify this option.
TRACE	Limits *groups* processed. *groups* can be one of the following: *n* — Specifies one group. *n–m* — Specifies a range of groups. *n+* — Specifies a range of groups starting with *n* and ending at the end of the file. all — Specifies all groups. If you specify the I option along with the TRACE option, TRACE is ignored. You can also use T to specify this option.
VLEVEL	Sets the verbosity level of error messages. *level* is a number from 0 through 9. See "Verbosity Levels" for a list of levels. You can also use V to specify this option.
ZERO	Resets one or more group buffers. *groups* are the same as those listed in the TRACE option. You can also use Z to specify this option.
ZGROUP	Same as ZERO.

Description

UVFIXFILE traces through a file's groups, identifies problem groups, and reports their location to standard error. If you specify the FIX option, UVFIXFILE repairs most damaged files. However, UVFIXFILE cannot detect certain file breaks, and therefore it cannot fix them.

The LOG and OUTPUT keywords create files in the current account directory. You can access these files from the current UniVerse account by referring to them as records in the type 1 file &UFD&. Use the following syntax with any UniVerse command that accesses type 1 files:

command **&UFD&** { *logfile* | *outfile* }

If you specify LOG or OUTPUT and logfile or outfile already exists, UVFIXFILE asks if you want to use the existing file. If you enter **Y** at the prompt, UVFIXFILE appends output to the file. If you answer **N**, you return to the system prompt (>).

To invoke UVFIXFILE from an operating system command prompt, use the uvfixfile command.

Verbosity Levels. You can set the verbosity level of error messages from the command line, in interactive mode, and in step mode. *level* is a number from 0 through 9.

Level	Display
0	Errors only
1	Diagnostic messages and errors
2	Diagnostic messages, errors, and number of group buffer being processed
3	Diagnostic messages, errors, number of group buffer being processed, and group statistics
4	Diagnostic messages, errors, number of group buffer being processed, group statistics, and record header information, including the address of the current record block, forward link, backward link, and flagword (displayed in hexadecimal format)
5	Diagnostic messages, errors, number of group buffer being processed, group statistics, record header information, and meaning of bits set in each flagword
6	Diagnostic messages, errors, number of group buffer being processed, group statistics, record header information, meaning of bits set in each flagword, and record ID
7	Diagnostic messages, errors, number of group buffer being processed, group statistics, record header information, meaning of bits set in each flagword, record ID, and data record

Level	Display
8	Record ID only
9	Record ID and data record only

Interactive Mode. When you use the I (interactive) option, the interactive mode prompt (:) appears. You can use the following commands in interactive mode:

!*command*	Runs operating system *command.*
?	Displays available interactive mode commands with a brief description of each.
akpath [*pathname*]	Changes the pathname of the file's secondary indices (alternate keys) to *pathname*. If you do not specify *pathname*, displays the current pathname of the file's secondary indices. To set the secondary indices path to an empty string, specify *pathname* as NULL.
case *setting*	Sets input case. *setting* can be **invert** or **noinvert**.
ex[it]	Exits *uvfixfile* (same as quit).
file *pathname*	Opens a file specified by *pathname.*
gl	Sets group locks while tracing.
group.lock	Same as gl.
hash *record.ID*	Displays the group to which *record.ID* hashes.
help	Displays available interactive mode commands with a brief description of each.
locks	Displays if group locks will be set.
m[ap] *n*	Maps primary buffer and overflow buffer layout.
n[ext]	Gets the next file in a select list.
nl	Does not set group locks while tracing.
no.lock	Same as nl.
open *pathname*	Opens a file specified by *pathname.*
q[uit]	Exits *uvfixfile* (same as exit).
rev[ision]	Displays the *uvfixfile* revision number.
set {dec | hex}	Sets the default base to decimal (**dec**) or hexadecimal (**hex**).

stats	Displays file statistics.
s[tep] *group#*	Steps through one group buffer one record block at a time. See "Step Command" for a list of commands you can use when stepping through a group.
t[race] *groups*	Traces through one or more groups. *groups* can be the number of one group, a range of groups, a starting group number followed by a **+** (continues to the end of the file), or **all**.
uvfile *filename*	Opens a new file using the VOC entry.
v[level] [*n*]	Sets verbosity level. *n* is a number from 0 through 9. If you do not specify *n*, *uvfixfile* displays the current verbosity level. See "Verbosity Levels" for a list of levels.
z[ero] *groups*	Resets one or more group buffers. *groups* can be the number of one group, a range of groups, a starting group number followed by a **+** (continues to the end of the file), or **all**.
zgroup *groups*	Same as z.

Step Command. You can use the step command only when you are in interactive mode. When you enter the step command, the step prompt (`step>`) appears. You can enter the following commands at the step prompt:

?	Displays available step commands.
Return	Displays the next record block.
c[ont]	Switches to trace mode and displays the rest of the group.
f[wd]	Displays the next record block.
h[elp]	Displays available step commands.
q[uit]	Quits, and redisplays the interactive mode prompt (:).
set *parameter*	Sets various record block parameters. See "Set Command" for a list of parameters you can set.
v[level] *n*	Sets verbosity level to *n*. *n* is a number from 0 through 9. See "Verbosity Levels" for a list of levels.

Set Command. You can use the set command only when you are in step mode. You can set any of the following parameters:

bckupflg	Sets the backup flag.
blink [*value*]	Changes the backward link.

dec	Changes default base to decimal.
flagword [*value*]	Changes the flagword.
flink [*value*]	Changes the forward link.
freeflag	Marks the record block as free.
grpresiz	Sets the relocated group bit.
hex	Changes default base to hexadecimal.
ovflwbuf	Sets the oversize buffer bit.
ovflwchn	Sets the oversize change bit.
padinrec	Sets the record block padding flag.
t30first	Sets the dynamic file t30first bit.
t30lastb	Sets the dynamic file t30lastb bit.
transflg	(Obsolete) Sets transflg.
usenewpd	Sets the new style item padding flag.

UVPROMPT

Use UVPROMPT to change the command-line-prompt character, the select-list-active character, and the line-continue character.

Syntax

UVPROMPT [*prompt*] [*select*] [*continue*]

Qualifiers

prompt The new command-line-prompt character. The default is > .

select The new select-list-active character. The default is the same as the command-line-prompt character.

continue The new line-continue character. The default is + .

UVPROMPT uses only the first character of *prompt*, *select*, and *continue* as the prompt character.

Use *uvrestore* from a UNIX shell to restore specified UniVerse files or records saved by a previous *uvbackup* procedure. You can also restore an entire system. For access to all system, UniVerse, and SQL files, you must be a UniVerse Administrator.

Syntax

uvrestore [**–F** *pathname*[*=newpathname*] [**–R** *record*[*=newrecord*]]]
[**–b** *blksize*] [**–i**] [**–l**] [**–L**] [**–n**] [**–p**] { [**–t** *device*] … }
[**–U**] [**–v**|**–V**] [**–** | *imagepath*]

Qualifiers

Specify each option separately, and precede each option with a hyphen.

–F Restores only the specified file. *pathname* must match the filename saved in the image (use the *–i* option to determine what files are in the image). If you specify *newpathname*, the file originally saved in *pathname* is restored as *newpathname*. To specify more than one file, use multiple *–F* options.

–R Restores only the specified records. *record* must match the record ID saved in the image. There can be multiple occurrences of this option. If you specify *newrecord*, the record is written to the file as *newrecord*. You can use the *–R* option only when you specify one *–F* option. Any other use terminates the restore process.

–b Specifies the block size in increments of 512 bytes. The default is 8192. Minimum is 512, maximum is defined by the configurable parameter BLKMAX.

–i Displays an index of image contents. Nothing is restored.

–l Displays tape label information during processing.

–L Displays the tape label only.

–n Disables automatic creation of files. This option is valid only when used with a full backup image. Files to be restored must exist.

–p Prompts before restoring a file or record. Possible responses are:

- **y** Restore the file or record. (You can also press **Return** to restore the file or record.)
- **n** Do not restore the file or record.

d Disable prompting after the current prompt.

q Quit *uvrestore* and return to the shell prompt.

–t Specifies the device from which to read data. *device* can be either a pathname or an entry in the &DEVICE& file. Use multiple *–t* options to specify up to 10 devices. *uvrestore* reads from the first device specified, then the second, and so on.

–U Overwrites disk files with the same names as those being restored. The *–U* option deletes the disk file and creates a new file with the same type, modulo, and separation as the one on the image. If you do not specify *–U*, files in an image that are older than a disk file are not restored.

–v Displays filenames and record count as the files are restored. If there is an error, a message describing the problem appears.

–V Displays filenames and, for UniVerse hashed files, record IDs as they are restored. If there is an error, a message describing the problem appears.

– Specifies that the name of the restore image should be taken from standard input.

imagepath Specifies the pathname of the backup image to restore. *imagepath* can be the name of a device or the name of a file where the image is stored. If you do not specify *imagepath*, *uvrestore* prompts for it.

Description

To restore the contents of a directory and all its dependencies, append a slash followed by an asterisk (*) to *pathname*. For example, to restore all files and subdirectories in the SALES directory, use a command like the following:

```
$ uvrestore -F '/usr/SALES/*' -l -v /dev/rmt/0
```

To restore all files beginning with UV, use a command like the following:

```
$ uvrestore -F '/usr/SALES/UV*' -l -v /dev/rmt/0
```

Enclose the filename in single quotation marks to prevent the UNIX shell from treating the asterisk as a wildcard character.

Examples

This example lists pathnames of all directories and files on a tape in the drive attached to the device file */dev/rmt/0*. Nothing is restored to disk.

```
$ uvrestore -i /dev/rmt/0
```

The next example copies the file ORDERS from the tape to the file ORDERS.TMP on disk. The *–p* option prompts you before restoring the file. Once the file is restored, you can use the COPY command to copy specified records from the restored file to the ORDERS file.

```
$ uvrestore -F ORDERS=ORDERS.TMP -p /dev/rmt/0
```

uvrestore (Windows NT)

Use *uvrestore* from an operating system command prompt to restore specified UniVerse files or records saved by a previous *uvbackup* procedure. You can also restore an entire system. For access to all system, UniVerse, and SQL files, you must be a UniVerse Administrator.

Syntax

uvrestore [**–F** *pathname*[=*newpathname*] [**–R** *record*[=*newrecord*]]] [**–i**] [**–l**] [**–L**] [**–n**] [**–p**] [**–U**] [**–v** | **–V**] [**–t** *device*] [**–nodrv**] [*imagepath*]

Qualifiers

Specify each option separately, and precede each option with a hyphen.

–F Restores only the specified file. *pathname* must match the filename saved in the image (use the *–i* option to determine what files are in the image). If you specify *newpathname*, the file originally saved in *pathname* is restored as *newpathname*. To specify more than one file, use multiple *–F* options.

–R Restores only the specified records. *record* must match the record ID saved in the image. There can be multiple occurrences of this option. If you specify *newrecord*, the record is written to the file as *newrecord*. You can use the *–R* option only when you specify one *–F* option. Any other use terminates the restore process.

–i Displays an index of image contents. Nothing is restored.

–l Displays tape label information during processing.

–L Displays the tape label only.

–n Disables automatic creation of files. This option is valid only when used with a full backup image. Files to be restored must exist.

–p Prompts before restoring a file or record. Possible responses are:

- **y** Restore the file or record. (You can also press **Return** to restore the file or record.)
- **n** Do not restore the file or record.
- **d** Disable prompting after the current prompt.
- **q** Quit *uvrestore* and return to the shell prompt.

–U	Overwrites disk files with the same names as those being restored. The *–U* option deletes the disk file and creates a new file with the same type, modulo, and separation as the one on the image. If you do not specify *–U*, files in an image that are older than a disk file are not restored.
–v	Displays filenames and record count as the files are restored. If there is an error, a message describing the problem appears.
–V	Displays filenames and, for UniVerse hashed files, record IDs as they are restored. If there is an error, a message describing the problem appears.
–nodrv	Strips the drive letter from restored pathnames. This option is used to restore files onto a different disk.
–t	Specifies the tape device name as defined in the &DEVICE& file, for example MT0.
imagepath	Specifies the pathname of the backup image to restore. *imagepath* is the name of a file where the image is stored. If you do not specify *imagepath*, *uvrestore* prompts for it.

Description

To restore the contents of a directory and all its dependencies, append a slash followed by an asterisk (*) to *pathname*. For example, to restore all files and subdirectories in the SALES directory, use a command like the following:

```
$ uvrestore -F "/usr/SALES/*" -l -v -t MT0 -nodrv
```

To restore all files beginning with UV, use a command like the following:

```
$ uvrestore -F "/usr/SALES/UV*" -l -v -t MT0 -nodrv
```

Enclose the filename in double quotation marks to prevent the operating system shell from treating the asterisk as a wildcard character.

Examples

This example lists pathnames of all directories and files on a tape in the drive attached to the device defined as MT0 in the &DEVICE& file. Nothing is restored to disk.

```
$ uvrestore -i -t MT0
```

The next example copies the file ORDERS from the tape to the file ORDERS.TMP on disk. The *–p* option prompts you before restoring the file. Once the file is restored, you can use the COPY command to copy specified records from the restored file to the ORDERS file.

```
$ uvrestore -F ORDERS=ORDERS.TMP -p -t MT0
```

Use VCATALOG to compare the object code of a program in the system catalog space with the object code for that program in a file in your account. This command verifies only the executable code. VCATALOG is not needed for locally cataloged programs because UniVerse does not copy the object code to the system catalog space.

Syntax

VCATALOG [*filename* [[*catalog*] [*program*]]] [**LOCAL**]

Qualifiers

filename The name of the file that contains the source code for the program being compared. The source code must be compiled prior to using the VCATALOG statement. UniVerse assumes that the object code is in the corresponding object code file named *filename*.O.

catalog The name of the program in the system catalog space.

program The record in the file *filename*.O that contains the object code of the program being compared.

LOCAL Specifies that the program being verified is a locally cataloged program.

Description

If you do not specify *filename*, you cannot specify any other qualifiers on the command line. In this case, VCATALOG prompts you for the qualifier values, one at a time. If you press **Return** at any of the prompts, VCATALOG terminates without verifying.

If you do not specify *catalog*, VCATALOG uses the program name as the catalog name.

If the executable object code for the program in the system catalog space matches the executable object code for the program in file *filename*.O, this message appears:

```
Program verifies.
```

If the object codes are different, the following message appears:

```
Program does not verify.
```

VERIFY.DF

Use VERIFY.DF to examine the headers of a distributed file and its part files, and list inconsistencies.

Syntax

VERIFY.DF *dist.filename*

Qualifiers

dist.filename The name of a distributed file.

Description

VERIFY.DF reads the distributed file header and opens each part file to verify its pathname and part number. It then displays any inconsistencies.

Use the REBUILD.DF command to fix distributed file inconsistencies.

Example

This example reports that PARTFILE2's part number was changed, PARTFILE4 was moved, and PARTFILE1's part number is invalid:

```
>VERIFY.DF DIST.FILE

Examining "PARTFILE2".
Part number in PARTFILE2 has changed from 2 to 3.

Examining "PARTFILE4".
Partfile "PARTFILE4" has been moved to /usr/ACCOUNTS/PARTFILE4.

Examining "PARTFILE1".
Part file "PARTFILE1" has an invalid part number of 0.
Invalid or missing Partblock for "PARTFILE1".

Examining "PARTFILE3".
```

Use VERIFY.SQL to examine the SQL catalog for inconsistencies and report any that are found. You can also use VERIFY.SQL to fix the inconsistencies.

You must be a valid SQL user to run VERIFY.SQL. You must have proper operating system permissions and SQL privileges on all tables, views, and schemas you want to verify. You also need DBA authority to use certain keywords.

Syntax

VERIFY.SQL { **TABLE** | **VIEW** } { *table* | *pathname* } [**FIX**] [*options*]

VERIFY.SQL SCHEMA [*schema* | *pathname*] [**FIX**] [*options*]

VERIFY.SQL { **CATALOG** | **ALL** } [**FIX**] [*options*]

VERIFY.SQL SCHEMAS [*options*]

Qualifiers

TABLE	Verifies the contents of the table's SICA against data in the SQL catalog.
VIEW	Verifies the contents of the view's SICA against data in the SQL catalog.
SCHEMA	Verifies data about the schema and the SICAs of all its tables and views against data in the SQL catalog. If you do not specify the name or pathname of a schema, the current schema is verified.
SCHEMAS	Verifies the owners, pathnames, and schema names of all schemas on the system against data in the SQL catalog. When you use this keyword, the VERIFY.SQL command can take a long time to execute, because it looks at all directories on the system.
CATALOG	Verifies the internal consistency of the SQL catalog.
ALL	Verifies all SQL objects on the system, including the internal consistency of the SQL catalog, against data in the SQL catalog. If you do not have DBA authority, you may see many messages saying you lack SQL privileges to verify schemas and tables. When you use this keyword, the VERIFY.SQL command can take a long time to execute, because it looks at all directories on the system.
table	The name of an SQL table or view in the current schema.

schema	The name of an SQL schema.
pathname	The full pathname of a table, view, or schema.
FIX	Fixes all inconsistencies found. You must have DBA authority to use the FIX keyword with the ALL and CATALOG keywords.

options can be any of the following:

LPTR	Sends output to the printer, instead of the terminal.
NOPAGE	Suppresses automatic paging of terminal output. NOPAGE is ignored if you use it in the same sentence with LPTR.
BRIEF	Suppresses terminal output. Use this option when you want to fix SQL catalog inconsistencies but do not want to display the VERIFY.SQL report on your screen. BRIEF is ignored if you use it in the same sentence with LPTR.

Description

VERIFY.SQL compares data in the security and integrity constraints areas (SICAs) of tables, views, and schemas to data in the SQL catalog, and displays any inconsistencies.

VERIFY.SQL is a diagnostic tool that you should use if you suspect information in the SQL catalog is inconsistent with the schemas, tables, views, directories, and files on your system. Such inconsistencies should not occur during normal use, but they can happen when you use operating system commands to manipulate UniVerse files (such as deleting, copying, and moving).

Users who do not have DBA authority can verify only tables, views, and schemas they have operating system permissions and SQL privileges to access. DBA administrators can verify all tables, views, and schemas on the system, provided they have proper file and directory permissions.

Fixing SQL Catalog Inconsistencies. The FIX keyword changes the data in the SQL catalog to make it agree with data in the schemas' VOC files and in the SICAs of its tables and views. If data is found in the SQL catalog for a schema, table, or view that does not exist, the data in the SQL catalog is deleted. If SQL catalog data is internally inconsistent, the data is changed to make it agree with the data found in the SQL objects it is currently verifying.

If there is no corresponding data in the SQL catalog, the inconsistencies are fixed as follows:

Command	Description
VERIFY.SQL SCHEMA *pathname* FIX VERIFY.SQL SCHEMA FIX	Creates the SQL catalog data using information in the schema's VOC file and in the SICAs of the schema's tables.
VERIFY.SQL TABLE *pathname* FIX	Creates the SQL catalog data using information in the SICA of the table.
VERIFY.SQL VIEW *pathname* FIX	Creates the SQL catalog data using information in the SICA of the view.
VERIFY.SQL SCHEMA *schema* FIX	No SQL catalog data is changed and an error message appears. VERIFY.SQL cannot locate a schema by name if the name is not in the SQL catalog.
VERIFY.SQL TABLE *table* FIX	No SQL catalog data is changed and an error message appears. VERIFY.SQL cannot locate a table by name if the name is not in the SQL catalog.
VERIFY.SQL ALL FIX	Creates the SQL catalog data using information in all the schemas' VOC files and in the SICAs of their tables. If an SQL table is not in a valid schema, no SQL catalog data is changed and an error message appears.

Note: The FIX option of VERIFY.SQL changes the SQL catalog only; it does not make changes to the VOC file, the SICAs of tables, or any UniVerse files.

Examples

This example finds one error, because the name of the table INV was changed to INVTY (using an operating system command). The name of the dictionary was also changed, a VOC entry for INVTY was created, and the VOC entry for INV was deleted.

```
>VERIFY.SQL SCHEMA ACCOUNTS LPTR
VERIFY.SQL SCHEMA ACCOUNTS LPTR  12:54:12pm  13 Jul 1996 PAGE   1

Checking permission.
Building table list.......Done.
```

```
Verifying table '/usr/CUST'.
Checking file permissions.
Doing verify on table '/usr/CUST'.
Checking Column 'CUSTNO'.
Checking Column 'BILLTO'.
Checking Column 'PHONE'.
Checking Column 'PHONEDESC'.
Checking Association 'PHONES'.
Checking UV_USERS data for owner 'george'.

Verifying table '/usr/INVTY'.
Checking file permissions.
Possible Moved or Copied table.
Doing verify on table '/usr/INVTY'.
! The operating system table name 'INVTY' does not match table name 'INV'
    found in the SICA.
* Table has been renamed.
* SQL catalog data for table 'INV (ACCOUNTS)' should be moved.
Checking Column 'PRODNO'.
Checking Column 'DESCRIP'.
Checking Column 'QOH'.
Checking Column 'COST'.
Checking Column 'SELL'.
Checking Column 'REORDER'.
* The path in the catalog data for 'INV (ACCOUNTS)' doesn't match the path
    to the table 'INVTY'.
Checking UV_USERS data for owner 'george'.
* No SQL catalog data for table '/usr/INVTY' in the UV_USERS record for
    user 'george'.

Verifying table '/usr/ORD'.
Checking file permissions.
Doing verify on table '/usr/ORD'.
Checking Column 'ORDERNO'.
Checking Column 'DATE'.
Checking Column 'CUSTNO'.
Checking Column 'PRODNO'.
Checking Column 'QTY'.
Checking Association 'BOUGHT'.
Checking UV_USERS data for owner 'george'.

Verifying table 'INV'.
Checking file permissions.
* There is no table 'INV' in the schema 'ACCOUNTS'.
* SQL catalog data for table 'INV (ACCOUNTS)' should be deleted.
```

```
1 information-only condition found.
4 fixable errors found.

Items marked with a '!' are information messages only.
Items marked with a '*' can be fixed by using the FIX option to VERIFY.SQL.
Items marked with a '**' are situations where VERIFY.SQL could not
continue.
```

The next example uses the FIX keyword to rename the table INV to INVTY:

```
>VERIFY.SQL TABLE /usr/INVTY FIX LPTR
VERIFY.SQL TABLE /usr/INVTY FIX LPTR  12:56:28pm  13 Jul 1995 PAGE   1

Checking file permissions.
Possible Moved or Copied table.
Doing verify on table '/usr/INVTY'.
! The operating system table name 'INVTY' does not match table name 'INV'
    found in the SICA.
* Table has been renamed.
* Moving table data from table 'INV (ACCOUNTS)' to table
    '/usr/INVTY (ACCOUNTS)'.
* Moving column data from table 'INV (ACCOUNTS)' to table
    '/usr/INVTY (ACCOUNTS)'.
* Moving association data from table 'INV (ACCOUNTS)' to table
    '/usr/INVTY (ACCOUNTS)'.
* Moving ownership record for user 'george'.
Checking Column 'PRODNO'.
Checking Column 'DESCRIP'.
Checking Column 'QOH'.
Checking Column 'COST'.
Checking Column 'SELL'.
Checking Column 'REORDER'.
Checking UV_USERS data for owner 'george'.

1 information-only condition found.
1 error fixed.

Items marked with a '!' are information messages only.
Items marked with a '*' have been fixed.
Items marked with a '**' are situations where VERIFY.SQL could not
continue.
```

VI

Use VI to invoke the UNIX editor, *vi*. *vi* is a full-screen editor that can be used to create and edit BASIC programs and to edit records in a type 1 or type 19 file.

This command is not supported on Windows NT systems.

Syntax

VI [*pathname*]

Qualifier

pathname The UNIX pathname of the file you want to edit. You can use either a relative or an absolute pathname.

Description

You cannot create a UniVerse file using VI. You must first create the file using CREATE.FILE.

Type 1 and type 19 files are implemented as UNIX directories. Records in type 1 and type 19 files are UNIX files. When you use VI, specify the UNIX pathname for the record to edit rather than a standard UniVerse record specification. Note that the UNIX pathname can be different from the UniVerse file name and record name.

See your UNIX documentation for information about the *vi* editor.

If you want to use *vi* to edit a record in a hashed file, use the UV.VI command.

Example

To edit the program RECEIVABLES in the file BP, enter:

```
>VI BP/RECEIVABLES
```

Use VLIST to display a listing of BASIC object code. VLIST displays each line of source code followed by the lines of object code it generated. VLIST also displays statistics about your program.

Syntax

VLIST [*filename*] *program* [**R**]

Qualifiers

filename The name of the file containing the source code of the BASIC program. The default *filename* is BP.

program The name of the program to list.

R Specifies to use internal reference numbers for variables and constants rather than the source code names and values.

Example

```
>VLIST BP TO.LIST
Main Program "BP.O/TO.LIST"
Compiler version: 5.1.5
Object Level    : 4
Machine type    : 0x0
Local Variables : 1
Subroutine args : 0
Unnamed Common  : 0
Named Commed Seg: 0
Object Size     : 0x1e
Source lines    : 4

   1: FOR I = 1 TO 10
0001 0000 : 09a forinit      1
0001 0004 : 09e fornext      I to 1 001c

   2: PRINT I
0002 0010 : 103 printcrlf    I
   3: NEXT I
0003 0016 : 0c2 jump         0004:

   4: END
0005 001c : 190 stop
```

VVOC

Use VVOC to verify the contents of your VOC file by comparing your VOC file to the system's NEWACC file.

Syntax

VVOC [**NO.PAGE**] [**LPTR**]

Qualifiers

NO.PAGE	Suppresses automatic paging.
LPTR	Sends output to the printer.

Description

When the UniVerse Administrator creates a new UniVerse account, UniVerse uses information in the NEWACC file to build the account's VOC file. As you use the account to create files, sentences, paragraphs, and other items, your VOC file changes. None of the item you create in your account appear in the NEWACC file.

However, when the UniVerse software changes (for example, when a new release is installed), your VOC file needs to be updated for records that should be the same in your VOC and in NEWACC.

VVOC compares each record in your VOC file against the records in the NEWACC file. If VVOC finds records that do not match, it lists the differences on the terminal or printer and in one of three select lists saved in the &SAVEDLISTS& file. These saved lists are named &VOC.ONLY, &NEWACC.ONLY, and &VOC.DIFF.

&VOC.ONLY	Contains IDs for records that are in your VOC file but not in NEWACC. All your file definitions, sentences, paragraphs, phrases, menus, and so on, are in this list.
&NEWACC.ONLY	Contains IDs for records that are in NEWACC but not in your VOC file. Under most circumstances, you should not have any records in this list. However, you should notify your system f to verify that this is so. Your UniVerse Administrator may have removed some records for your installation. If so, the names of those records appear in this list.

&VOC.DIFF	Contains IDs for records that are in NEWACC and your VOC file but are different. If you have any records in this list, you may have some errors, or your installation may be unique. Check with your UniVerse Administrator.

To use any of these select lists, use the GET.LIST command.

VVOC only lists differences, it does not reconcile them. Use UPDATE.ACCOUNT to update your VOC file.

WHO

Use WHO to display your terminal number and the name of your current account directory. If your login name is different from the account directory name, WHO also displays your login name.

Syntax

WHO

Examples

The output of the WHO command is similar to the following:

```
>WHO
3 mjones
>
```

This indicates that you are working in a directory named *mjones* on terminal 3.

If you used LOGTO to move to another account, the output of the WHO command is similar to the following:

```
>WHO
3 accounting From mjones
>
```

`accounting` indicates you are working in a directory named *accounting*, and `From mjones` indicates you are logged in as *mjones*.

2
UniVerse Keywords

Keywords in a UniVerse sentence let you modify the action of the command. Using keywords, you can do the following:

- Specify the value of a field in relation to other values, such as greater than, equal to, or less than.
- Sort the values in ascending or descending order.
- Verify that field values exist in another field.
- Design margins, headings, footers, and column sizes for reports.
- Summarize data and display aggregate results for reports.
- Specify breakpoints and display subtotals in a report.
- Specify a magnetic tape unit.
- Make a sentence more like colloquial English.

Introduction

The tables in the following sections list selected keywords grouped by function. The tables list keyword symbols (such as relational operators), field modifiers, field qualifiers, and report qualifiers. The rest of this chapter describes all UniVerse keywords in alphabetical order.

Keyword Symbols

Table 2-1 lists symbols you can use as keywords.

Table 2-1. Keyword Symbols

Symbol	Synonym	Description
<	LT LESS BEFORE	Less than operator
<= =<	LE	Less than or equal to operator
=	EQ EQUAL	Equal to operator
>= =>	GE	Greater than or equal to operator
>	GT GREATER AFTER	Greater than operator
<> > #	NE NO	Not equal
~	SAID SPOKEN	Sounds like
%	PCT PERCENT PERCENTAGE	Calculate percentages
&	AND	The logical operator AND
(		Open parenthesis
)		Close parenthesis

Field Modifier Keywords

Table 2-2 lists keywords you can use to modify field expressions in RetrieVe sentences. For information about field expressions, see *Guide to RetrieVe*.

Table 2-2. Field Modifier Keywords

Keyword	Synonym	Description
AVG	AVERAGE	Calculates and lists the average for the field.
BREAK.ON	BREAK-ON	Specifies breakpoints in a report.
BREAK.SUP		Specifies breakpoints in a report, suppressing the BREAK.ON display.
CALC	CALCULATE	Specifies TOTAL calculations. Operates only on I-descriptor fields. Specifies a calculation using the TOTAL function included in the I-descriptor field definition.
ENUM	ENUMERATE	Counts and lists the total number of values for the field.
MAX		Calculates and lists the maximum value for the field.
MIN		Calculates and lists the minimum value for the field.
PCT	% PERCENT PERCENTAGE	Calculates and lists percents.
TOTAL		Calculates and lists the field total. (The TOTAL keyword differs from the TOTAL function used with I-descriptor fields.)
TRANSPORT		Lists the last value for the field.

Field Qualifier Keywords

Table 2-3 lists keywords you can use to define in-line field descriptors in RetrieVe sentences. Field qualifiers temporarily override the file dictionary for the duration of the RetrieVe command. For more information about field qualifiers, see *Guide to RetrieVe*.

Table 2-3. Field Qualifier Keywords

Keyword	Synonym	Description
AS		Specifies a name for an EVAL expression or a synonym for a field name.
ASSOC	ASSOCIATION	Associates a field expression with an association of multivalued fields.
ASSOC.WITH	ASSOCIATED	Associates a field expression with another multivalued field.
COL.HDG	DISPLAY.NAME DISPLAYNAME	Defines a column heading.
CONV	CONVERSION	Defines a conversion.
DISPLAY.LIKE	DISPLAYLIKE	Sets display characteristics.
FMT	FORMAT	Defines output format.
MULTI.VALUE	MULTIVALUED	Specifies a multivalued field expression.
SINGLE.VALUE	SINGLEVALUED	Specifies a single-valued field expression.

Report Qualifier Keywords

Table 2-4 lists keywords you can use to customize RetrieVe reports.

Table 2-4. Report Qualifier Keywords

Keyword	Synonym	Description
AUX.PORT		Sends output to printer connected to terminal's auxiliary port.
COL.HDR.SUPP	COL-HDR-SUPP	Suppresses default report and column headings.
COL.SPCS	COL.SPACES COLUMN SPACES	Changes default spacing between columns.
COL.SUP	COL-SUPP SUPPRESS COLUMN HEADING SUPPRESS COLUMN HEADER	Suppresses default column headings.
COUNT.SUP		Suppresses display of record count.
DBL.SPC	DBL-SPC DOUBLE SPACE	Double-spaces output records.
DET.SUP	DET-SUPP	Displays breakpoints only.
FIRST	SAMPLE	Limits number of records selected.
FOOTING	FOOTER	Defines footer for report page.
GRAND.TOTAL	GRAND-TOTAL GRAND TOTAL	Specifies text for grand total line.
HDR.SUP	HDR-SUPP SUPP	Suppresses default report heading.
HEADING	HEADER	Overrides default heading.
HEADING DEFAULT	HEADER DEFAULT	Displays default heading.
ID.ONLY	ONLY	Displays record IDs only.
ID.SUP	ID-SUP ID-SUPP	Suppresses record ID display.
LPTR		Prints output on line printer.

Table 2-4. Report Qualifier Keywords (Continued)

Keyword	Synonym	Description
MARGIN		Specifies size of left margin.
NOPAGE	NO.PAGE	Suppresses automatic paging.
ONLY	ID.ONLY	Displays record IDs only.
SAMPLE	FIRST	Limits the number of records selected.
SAMPLED		Limits the number of records selected.
SUPP	HDR.SUPP HDR-SUPP	Suppresses default heading.
SUPPRESS COLUMN HEADING	COL.SUP COL-SUPP SUPPRESS COLUMN HEADER	Suppresses column headings.
SUPPRESS DETAIL	DET.SUP DET-SUPP	Displays breakpoints only.
VERTICALLY	VERT	Displays output in vertical format.

Keyword Descriptions

The UniVerse keywords are listed and defined in this section.

(...)

Use in RetrieVe sentences to group selection criteria. Parentheses alter the order of the evaluation.

@ASSOC_ROW

Use as a column name in the SQL SELECT, INSERT, UPDATE, and DELETE statements to reference an association's keys. @ASSOC_ROW generates a sequence of unique numbers which, when used with the primary key of the base table, produces a set of jointly unique association row keys. Use @ASSOC_ROW when the association does not have explicitly defined association keys. @ASSOC_ROW acts as a virtual column name when you dynamically normalize an NF^2 table or file.

For example, if a multivalued column for telephone numbers contains fax numbers as the fifth value, you can delete the fax numbers using a WHERE clause like the following to select only the fifth association row of each base table row:

```
>DELETE FROM CUSTOMERS_PHONES
SQL+WHERE @ASSOC_ROW = 5;
```

A

Use in any RetrieVe sentence to make it more English-like. This keyword is not required and is ignored by RetrieVe.

ADDING

Use with the DEFINE.DF command to add a part file to a distributed file.

AFTER

Synonym for GT.

ALL

Use in a COPY sentence to copy all records in the source file. For example, to copy all records from FILE1 to FILE2, enter the following:

```
>COPY FROM FILE1 TO FILE2 ALL
```

Use with the secondary indices commands BUILD.INDEX, DELETE.INDEX, ENABLE.INDEX, LIST.INDEX, and UPDATE.INDEX, to specify that the command should affect all secondary indices of the file.

Use with the MASTER command to release all task synchronous locks.

Use with the UNLOCK command to remove all locks.

ALL.MATCH

Use with the SEARCH command to select only records containing all the specified strings.

AND

Logical operator AND used to join selection expressions, WHEN clauses, and IF statements. For example:

```
LIST MAIL WITH STATE EQ MA AND INTEREST EQ PAINT
IF <<Enter INTEREST>> = PAINT AND STATE = MA THEN GO DO.IT:
```

ANY

Use in any RetrieVe sentence to make it more English-like. This keyword is not required and is ignored by RetrieVe.

APPEND

Use with the DIVERT.OUT command to append output from diversion to the end of an existing record.

ARE

Use in any RetrieVe sentence to make it more English-like. This keyword is not required and is ignored by RetrieVe.

AS

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command as a synonym for BANNER.

Use as a field qualifier in a RetrieVe sentence or SQL SELECT statement to specify a new name for the field name or EVAL expression it qualifies. Its syntax is as follows:

AS *temp.name*

An AS clause follows the name of the field or the EVAL expression it qualifies. In the same RetrieVe query you can use *temp.name* anywhere after the AS clause to refer to the field or EVAL expression by its new name. *temp.name* cannot be the name of an existing field in the data file or the name of a VOC entry.

ASSOC

Use as a field qualifier in a RetrieVe sentence or SQL SELECT statement to associate a field expression with an existing association of multivalued fields. Its syntax is as follows:

ASSOC "*association*"

ASSOC temporarily overrides the file dictionary for the duration of the query. An ASSOC clause follows the name of the field or the EVAL expression it qualifies.

association is the record ID of the entry in the file dictionary that defines an association. It must be enclosed in single or double quotation marks. The entry defining the association must be in the file dictionary, not in the VOC file.

You cannot use the keywords ASSOC.WITH or SINGLE.VALUE in the same field expression with an ASSOC clause.

ASSOC.ROW

Synonym for @ASSOC_ROW.

ASSOC.WITH

Use as a field qualifier in a RetrieVe sentence or SQL SELECT statement to associate a field expression with another field expression that is multivalued. Its syntax is as follows:

ASSOC.WITH { *fieldname* | *temp.name* }

ASSOC.WITH temporarily overrides the file dictionary for the duration of the query. An ASSOC.WITH clause follows the name of the field or EVAL expression it qualifies.

fieldname and *temp.name* must be multivalued.

fieldname is the name of a field defined in the file dictionary.

temp.name is the name of a field expression specified earlier in the same RetrieVe query by an AS clause.

If the field expression qualified by the ASSOC.WITH clause is single-valued, it is marked as multivalued for the duration of the query.

You cannot use the keywords ASSOC or SINGLE.VALUE in the same field expression with an ASSOC.WITH clause.

ASSOCIATED

Synonym for ASSOC.WITH.

ASSOCIATIONS

Synonym for ASSOC.

AT

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command to route jobs to a system printer specified as its argument.

AUX.PORT

Use in a RetrieVe sentence or SQL SELECT statement to send results to a printer connected to the terminal's auxiliary port; results are also displayed on the screen.

The auxiliary port must be enabled by setting the *mc4* and *mc5* definitions in the *terminfo* entry for the user's terminal. The *mc4* definition turns off the auxiliary port, the *mc5* definition turns it on.

AVERAGE

Synonym for AVG.

AVG

Use in a RetrieVe sentence or SQL SELECT statement to calculate the average for a single-valued or multivalued numeric field of the selected records and list it at the bottom of a report. Its syntax is as follows:

AVG *field.expression* [**NO.NULLS**]

field.expression specifies the name of a field or an EVAL expression for which you want to calculate the average value. RetrieVe treats nonnumerics as zero values.

NO.NULLS tells RetrieVe to ignore empty string values.

When you use the AVG keyword with a breakpoint keyword (BREAK.ON or BREAK.SUP), RetrieVe lists breakpoint averages in addition to the overall average at the bottom of a report.

To average payments made in the last month, excluding empty string values, use a sentence like the following:

```
>LIST PAYABLES WITH PYMT.DATE >= 2/1/94 AVG PRICE NO.NULLS
```

BANNER

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command to specify a name on the banner page. Its syntax is as follows:

BANNER [**NEXT** | **UNIQUE**] [*name*]

In mode 1, *name* appears on the second line of the banner page under the account name. In mode 3, specifies the record ID of the record in &HOLD& which stores the report. If you do not specify *name*, the record ID is P#0000. If you specify *name*, it is the record ID of the output record. In either case, each subsequent print job uses the same record ID and overwrites the previous job.

In mode 3, BANNER NEXT appends a sequential number to the name under which successive records are created in &HOLD&. If you do not specify *name*, the record ID is P#0000_*nnnnnn*, where *nnnnnn* is increased for each new print job. If you specify *name*, the record ID is *name_nnnnnn*.

In mode 3, BANNER UNIQUE appends a sequential number to the name under which successive records are created in &HOLD&. If you do not specify *name*, the record ID is P#0000_*nnnnnn*, where *nnnnnn* is increased by each subsequent SETPTR command. If you specify *name*, the record ID is *name_nnnnnn*.

BEFORE

Synonym for LT.

BLK

Use with the ASSIGN, T.ATT, T.DUMP, REFORMAT, and SREFORMAT commands to define the block size of a tape record. The default block size is 8192 bytes, the maximum size. When you restore tape records to disk using T.LOAD, the block size is displayed.

For example:

```
>T.DUMP ACCOUNTS BLK 8000
```

BREAK

Use with the MASTER command to enable the **Break** key.

BREAK ON

UniVerse SQL synonym for BREAK.ON.

BREAK SUPPRESS

UniVerse SQL synonym for BREAK.SUP.

BREAK-ON

Synonym for BREAK.ON.

BREAK.ON

Use with RetrieVe commands and the SQL SELECT statement to specify which field to use to create breaks in a report. A break occurs when the column values change. The break is indicated by asterisks or by user-specified text. BREAK.ON expressions are often used with the keywords AVG, CALC, PCT, and TOTAL to perform the specified action and display the results when the values change.

To make the report more effective, sort the breakpointed field to process and display the same values together. If the field is multivalued, specify an exploded sort (using the BY.EXP or BY.EXP.DSND keyword).

The syntax for the breakpoint expression is as follows:

BREAK.ON ["[*text*] ['*options*'] ..."] *field*

text is any text you want to appear under the field value in the breakpoint line. If you specify *text*, the row of asterisks is suppressed. Text is not displayed when the report is in vertical format.

options can be any of the following formatting options. Options must be contained within single quotation marks, such as 'BDL'. All options suppress the breakpoint row of stars.

B Use with the B option of the HEADING or FOOTING keyword to include the current breakpoint value in the heading or footing. Every time the breakpoint value changes, a new page is generated. Only the first B option in a sentence is used.

D Suppresses printing of the breakpoint line if there is only one line of detail for a specific value, but leaves a blank line between records.

L Suppresses printing of the breakpoint line, but still skips a line when the value changes. If any text is specified in the sentence, it is ignored.

N Resets the page number to 1 for each new breakpoint value.

O Outputs each breakpoint value only once.

P Begins a new page for every new breakpoint value.

V Inserts the breakpoint field value instead of the line of stars.

Enclose the entire first argument, including all text and options, in double quotation marks.

field is the field to break on.

The breakpoint line in a report is a row of stars in the column displaying the breakpoint field and a row of dashes in any column being totalled, averaged, calculated, or having its percentage calculated.

For example, if you have a PRODUCT field in a PAYABLES file and want subtotals of money spent by product, you might create a sentence such as:

```
>LIST PAYABLES BY PRODUCT BREAK.ON PRODUCT TOTAL UNIT.PRICE
```

BREAK.SUP

Use with RetrieVe commands and the SQL SELECT statement to specify which field to use to create breaks in a report. BREAK.SUP does the same thing as BREAK.ON, except it does not display the row of stars or a column containing the values in the field specified.

BREAK.SUP uses the following options:

B Use with the B option of the HEADING and FOOTING keywords to include the current breakpoint value in the heading or footing. Every time the breakpoint value changes, a new page is generated. Only the first B option in a sentence is used.

D Suppresses the entire breakpoint line if there is only one line of detail for a specific value.

P Begins a new page for every new breakpoint value.

For example:

```
>LIST PAYABLES BY PRODUCT BREAK.SUP PRODUCT TOTAL UNIT.PRICE
```

BRIEF

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command to suppress display of SETPTR settings for approval.

Use with the PHANTOM command to direct process output to the null device.

BY

Use in a sort expression to sort selected records. Records are sorted in ascending order of values in the specified field. Its syntax is as follows:

BY *field*

field is a single-valued field. If you use BY with a multivalued field, field marks are ignored, and the values are treated as a single field and sorted as a unit. To sort by values in a multivalued field, use the BY.EXP keyword.

Fields with an R in the FORMAT field of the data descriptor are sorted right-justified. Fields with an L or a T in the FORMAT field are sorted left-justified.

You can use more than one sort expression in a RetrieVe query. RetrieVe processes sort expressions from left to right, so the first sort field is the primary sort key, the second sort field is the secondary sort key, and so on.

To create a list of balances from the smallest to the largest balance, use a sentence like the following:

```
>SELECT PAYABLES BY BAL.DUE
```

To display last names in alphabetical order, use a sentence like the following:

```
>SORT MAIL BY LNAME
```

BY-DSND

Synonym for BY.DSND.

BY.DSND

Use in a sort expression to sort selected records. Records are sorted in descending order of values in the specified field. Its syntax is as follows:

BY.DSND *field*

field is a single-valued field. If you use BY.DSND with a multivalued field, field marks are ignored, and the values are treated as a single field and sorted as a unit. To sort by values in a multivalued field, use the BY.EXP.DSND keyword.

Fields with an R in the FORMAT field of the data descriptor are sorted right-justified. Fields with an L or a T in the FORMAT field are sorted left-justified.

You can use more than one sort expression in a RetrieVe query. RetrieVe processes sort expressions from left to right, so the first sort field is the primary sort key, the second sort field is the secondary sort key, and so on.

To display account numbers from the highest number to the lowest number, use a sentence like the following:

```
>SORT ACCOUNTS BY.DSND ACCT.NO
```

BY-EXP

Synonym for BY.EXP.

BY.EXP

Use in a sort expression to explode and sort data in multivalued fields. The exploded multivalues are sorted in ascending order. Its syntax is as follows:

BY.EXP *mvfield*

mvfield is a multivalued fiel.d If you use BY.EXP on a single-valued field, the field is sorted as if BY were specified.

Fields with an R in the FORMAT field of the data descriptor are sorted right-justified. Fields with an L or a T in the FORMAT field are sorted left-justified.

Multiple Exploded Sort Expressions

You can use more than one exploded sort expression in a RetrieVe query. RetrieVe processes sort expressions from left to right, so the first sort field is the primary sort key, the second sort field is the secondary sort key, and so on.

To use more than one exploded sort expression (beginning with BY.EXP or BY.EXP.DSND) in a RetrieVe query, the fields specified by *mvfield* must belong to the same association. If they belong to different associations, RetrieVe uses only the first BY.EXP or BY.EXP.DSND clause and ignores all other exploded sort expressions. If the exploded fields do not belong to any association, RetrieVe assumes a default association for the duration of the query.

If the exploded field contains only subvalues, the subvalues are treated as if they were values. If the exploded field contains values and subvalues, and if the struc-

tures of the associated fields are the same, RetrieVe explodes the data to the subvalue level and sorts as expected. If the structures of the associated fields are different, the following rules apply:

- If the field specified by the first exploding sort expression contains values only, RetrieVe explodes only to the value level, regardless of whether fields specified by subsequent sort expressions contain subvalues. If the first exploding sort field contains subvalues, RetrieVe explodes to the subvalue level.
- Each atomic value of the first field is matched against corresponding values in fields specified by subsequent sort expressions, regardless of whether the corresponding values contain subvalues. Each subvalue of the first field is exploded and matched against corresponding subvalues in fields specified by subsequent sort expressions.
- If the associated fields do not have a corresponding value or subvalue, RetrieVe supplies an empty string. If the first field is missing a value or subvalue corresponding to a value or subvalue in the associated fields, RetrieVe supplies an empty string.

Exploded Sorts and Select Lists

If you use BY.EXP in a SELECT or SSELECT query, the format of the select list differs from the standard format. Each element in the select list has the following format:

*record.id*v*value*s*field*v*subvalue*

record.id is the record ID where the data value is found. *field*, *value*, and *subvalue* are the field, value, and subvalue numbers within the record containing the data value. **v** represents a value mark, and **s** represents a subvalue mark. If you use more than one BY.EXP or BY.EXP.DSND clause in a SELECT or SSELECT query, *field* is the number of the field specified in the first BY.EXP clause.

To display a list of products, use a sentence like the following:

```
>SORT PAYABLES BY.EXP PRODUCTS
```

BY-EXP-DSND

Synonym for BY.EXP.DSND.

BY.EXP.DSND

Use in a sort expression to explode and sort data in multivalued fields. The exploded multivalues are sorted in ascending order. Its syntax is as follows:

BY.EXP.DSND *mvfield*

mvfield is the multivalued field. If you use BY.EXP.DSND on a single-valued field, the field is sorted as if BY.DSND were specified.

Fields with an R in the FORMAT field of the data descriptor are sorted right-justified. Fields with an L or a T in the FORMAT field are sorted left-justified.

Multiple Exploded Sort Expressions

You can use more than one exploded sort expression in a RetrieVe query. RetrieVe processes sort expressions from left to right, so the first sort field is the primary sort key, the second sort field is the secondary sort key, and so on.

To use more than one exploded sort expression (beginning with BY.EXP or BY.EXP.DSND) in a RetrieVe query, the fields specified by *mvfield* must belong to the same association. If they belong to different associations, RetrieVe uses only the first BY.EXP or BY.EXP.DSND clause and ignores all other exploded sort expressions. If the exploded fields do not belong to any association, RetrieVe assumes a default association for the duration of the query.

If the exploded field contains only subvalues, the subvalues are treated as if they were values. If the exploded field contains values and subvalues, and if the structures of the associated fields are the same, RetrieVe explodes the data to the subvalue level and sorts as expected. If the structures of the associated fields are different, the following rules apply:

- If the field specified by the first exploding sort expression contains values only, RetrieVe explodes only to the value level, regardless of whether fields specified by subsequent sort expressions contain subvalues. If the first exploding sort field contains subvalues, RetrieVe explodes to the subvalue level.
- Each atomic value of the first field is matched against corresponding values in fields specified by subsequent sort expressions, regardless of whether the corresponding values contain subvalues. Each subvalue of the first field is exploded and matched against corresponding subvalues in fields specified by subsequent sort expressions.
- If the associated fields do not have a corresponding value or subvalue, RetrieVe supplies an empty string. If the first field is missing a value or

subvalue corresponding to a value or subvalue in the associated fields, RetrieVe supplies an empty string.

Exploded Sorts and Select Lists

If you use BY.EXP.DSND in a SELECT or SSELECT query, the format of the select list differs from the standard format. Each element in the select list has the following format:

*record.id*v*value*s*field*v*subvalue*

record.id is the record ID where the data value is found. *field*, *value*, and *subvalue* are the field, value, and subvalue numbers within the record containing the data value. v represents a value mark, and s represents a subvalue mark. If you use more than one BY.EXP or BY.EXP.DSND clause in a SELECT or SSELECT query, *field* is the number of the field specified in the first BY.EXP clause.

CALC

Use in a RetrieVe sentence or SQL SELECT statement to specify total calculations in I-descriptors. CALC can be used with breakpointing to produce subtotals. Its syntax is as follows:

CALC *field*

field is the name of an I-descriptor that is one of the fields included in the report. The I-descriptor expression must include the TOTAL function.

When CALC is used in a sentence with breakpointing, intermediate values for the expression are displayed on the breakpoint lines. The individually accumulated subtotals are used to calculate an intermediate value for the entire expression at the breakpoint. A final value for the expression is printed at the bottom of the report.

The ACCOUNTS file contains an I-descriptor called DIFFERENCE. It looks like this:

```
TOTAL(AMT.RCD)–TOTAL(AMT.PD)
```

A sentence using the I-descriptor and CALC looks like this:

```
>LIST ACCOUNTS BY ACCT.NO BREAK.ON ACCT.NO AMT.PD AMT.RCD CALC
   DIFFERENCE
```

CALCULATE

Synonym for CALC.

CANCEL

Use with the DEFINE.DF command to remove the part file number and algorithm from a part file.

–CANCEL

Use with the SPOOL command to delete a print job from the printer queue.

COL.HDG

Use as a field qualifier in a RetrieVe sentence or SQL SELECT statement to define a column heading for the field or EVAL expression it qualifies. Its syntax is as follows:

COL.HDG "*heading*"

COL.HDG temporarily override the file dictionary for the duration of the query. A COL.HDG clause follows the name of the field or EVAL expression it qualifies.

heading is the text of the heading at the top of the column when the field is displayed. The heading must be enclosed in single or double quotation marks.

To specify a line break in the column heading, use the letter L enclosed in single quotation marks and enclose *heading* in double quotation marks. If you specify *heading* as an empty string, the field name (i.e., the record ID of the field definition in the dictionary) is used.

COL-HDR-SUPP

Synonym for COL.HDR.SUPP.

COL.HDR.SUPP

Use in a RetrieVe sentence or SQL SELECT statement to suppress printing of the default page heading (page, time, and date), and column headings. Used in LIST.LABEL and SORT.LABEL statements, COL.HDR.SUPP produces a continuous form report without page breaks. The COL.HDR.SUPP phrase is a combination of the COL.SUP and HDR.SUP keywords.

COL.SPACES

Synonym for COL.SPCS.

COL.SPCS

Use in a RetrieVe sentence or SQL SELECT statement to change the default spacing between columns in the display. The default varies from one through four depending on the total width of the fields being displayed and the length of the field names. Each space is the width of a single screen column.

To change the spacing, include the number of spaces after the keyword COL.SPCS. If you do not include a number, only one space is left between columns. For example:

```
>LIST PAYABLES COL.SPCS 5
```

COL-SUPP

Synonym for COL.SUP.

COL.SUP

Use in a RetrieVe sentence or SQL SELECT statement to suppress the column headings, which are the display names that normally display at the top of the column. For example:

```
>LIST PAYABLES VENDORS BAL.DUE WITH BAL.DUE GT 10 COL.SUP
```

COLUMN SPACES

UniVerse SQL synonym for COL.SPCS.

COMPLETE

Use with the CATALOG command to specify that the VOC entry for a locally cataloged program is to contain the program's absolute pathname. The VOC entry normally contains the location of the program relative to the user's account.

CONCURRENT

Use in a RESIZE command to permit other users to access the file while it is being resized. To let other users use the file PAYABLES while it is being resized, enter the following:

```
>RESIZE PAYABLES 4 3 2 CONCURRENT
```

CONV

Use as a field qualifier in a RetrieVe sentence or SQL statement to define a conversion for the field name or EVAL expression it qualifies. Its syntax is as follows:

CONV "*conversion*"

CONV temporarily overrides the file dictionary for the duration of the query. A CONV clause always follows the name of the field or EVAL expression it qualifies.

conversion is any BASIC conversion code available to the ICONV and OCONV functions. The conversion must be enclosed in single or double quotation marks. If there is a conversion in the dictionary entry and you want no conversion applied, specify an empty string in the CONV clause. For more information about conversion codes, see *UniVerse BASIC Programmer's Guide*.

CONVERSION

Synonym for CONV.

COPIES

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command to print the number of copies specified in its argument of each report with a single banner page.

COUNT.SUP

Use in a RetrieVe sentence or SQL SELECT statement to suppress the message that lists the number of records processed.

CRT

Use with the LIST.DIFF, LIST.INTER, or LIST.UNION command to copy data to the terminal.

DATA

Use with a filename to specify the data file. Specify DATA immediately before the filename. To delete only the data file OVERDUE but retain its dictionary, enter the following:

```
>DELETE.FILE DATA OVERDUE
```

DBL-SPC

Synonym for DBL.SPC.

DBL.SPC

Use in a RetrieVe sentence or SQL SELECT statement to set double spacing between records in a report, overriding the default single spacing. For example:

```
>LIST MAIL WITH ZIP LIKE 02... DBL.SPC
```

DEFAULTS

Use with the CONFIGURE.FILE command to configure a dynamic (type 30) file with the default dynamic file parameters. The values for GROUP.SIZE and RECORD.SIZE are not changed by the DEFAULTS keyword.

DEFER

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command to defer printing of the report until the time specified in its argument. Its argument can be specified in one of the following formats:

hh:*mm*
dd.hh:*mm*
mm.dd.hh:*mm*
yy.mm.dd.hh:*mm*
dd
mm.dd
yy.mm.dd
+*mm*
+*hh*:*mm*
+*dd.hh*:*mm*

DELETING

Use with the COPY command to delete the records from the source file after they are copied to the new file. For example, to delete records 101 and 102 from the ACCOUNTS file after copying them to the DEADACCOUNTS file, enter the following:

```
>COPY FROM ACCOUNTS TO DEADACCOUNTS 101 102 DELETING
```

DET-SUPP

Synonym for DET.SUP.

DET.SUP

Use in a RetrieVe sentence or SQL SELECT statement containing a BREAK.ON expression to suppress detail lines and display only breakpoint, subtotal, and total lines. For example:

```
>LIST PAYABLES BY PRODUCT BREAK.ON PRODUCT TOTAL UNIT.PRICE
   DET.SUP
```

DETAIL

Use with the LIST.INDEX command to display additional information detailing the name of each secondary key value, the number of records with that key value, and the bytes used for that key value.

DICT

Use with a filename to specify the file dictionary rather than the data file. Specify DICT immediately before the filename. For example:

```
>REVISE DICT PAYABLES
```

```
>LIST DICT PAYABLES WITH TYPE EQ PH
```

DISKS

Use with the STATUS command to display disk usage information about all disks.

DISPLAY.LIKE

Use as a field qualifier in a RetrieVe sentence or SQL SELECT statement to set a field's display characteristics to be the same as those of another field. Its syntax is as follows:

DISPLAY.LIKE { *fieldname* | *temp.name* }

A DISPLAY.LIKE clause follows the name of an existing field or an EVAL expression.

fieldname is the name of a field defined in the file dictionary.

temp.name is the name of a field expression specified earlier in the same RetrieVe query by an AS clause.

When used in the same field expression with other field qualifiers, a DISPLAY.LIKE clause is processed before the CONV, COL.HDG, DISPLAY.NAME, FMT, SINGLE.VALUE, MULTI.VALUE, ASSOC, and ASSOC.WITH field qualifiers. You can use any of these keywords to override display characteristics set by the DISPLAY.LIKE clause.

DISPLAY.NAME

Synonym for COL.HDG.

DISPLAYLIKE

Synonym for DISPLAY.LIKE.

DISPLAYNAME

Synonym for COL.HDG.

DOUBLE SPACE

UniVerse SQL synonym for DBL.SPC.

DOWN

Use with the CHAP command to lower the priority of processing tasks for that account. CHAP DOWN causes 10 to be added to the priority number assigned each task.

DYNAMIC

Use with the CREATE.FILE, CONFIGURE.FILE, and RESIZE commands to specify a dynamic file. Dynamic files are created as type 30 files. DYNAMIC and 30 are equivalent file types.

EJECT

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command to perform a page eject at the end of a print job.

ENDPAGE

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command to specify ending page number for printing.

ENUM

Use in a RetrieVe sentence to count the number of values that occur in a specified field in a set of records. Its syntax is as follows:

ENUM *field.expression* [**NO.NULLS**]

field.expression specifies the name of a field or an EVAL expression for which you want to calculate the count. RetrieVe treats nonnumerics as zero values.

NO.NULLS tells RetrieVe to ignore empty string values.

If the field uses the default column header, the ENUM keyword is added before the column header.

If you use the ENUM keyword with a breakpoint keyword (BREAK.ON or BREAK.SUP), RetrieVe lists the data value for each record in addition to the enumeration count for each breakpoint and the final enumeration count at the bottom of the list.

If you specify a multivalued field, RetrieVe counts each value separately.

For example, the following sentence displays each phone number in the records of the PERSONNEL file, excluding empty string values, listing the number of values at the bottom of the report:

```
>LIST PERSONNEL ENUM PHONE NO.NULLS
```

ENUMERATE

Synonym for ENUM.

EQ

The relational operator EQUAL, used in selection expressions, WHEN clauses, and IF statements. For example:

```
>SORT INVENTORY WITH ITEM EQ 'SHIRTS'
```

EQUAL

Synonym for EQ.

EVAL

Use in any RetrieVe sentence to introduce an in-line I-descriptor expression. An EVAL expression defines a new virtual field which exists only for the duration of the current query. Its syntax is as follows:

EVAL "*i.type.expr*" [*qualifiers*]

i.type.expr is any expression that can be used in an I-descriptor, enclosed in single or double quotation marks.

qualifiers can be one or more field qualifier clauses beginning with the following keywords: AS, ASSOC, ASSOC.WITH, COL.HDG, CONV, DISPLAY.LIKE, DISPLAY.NAME, FMT, MULTI.VALUE, and SINGLE.VALUE.

You can use an EVAL expression anywhere you use a field name: in selection and sort expressions, as part of an output specification, and so on.

When the field is output, the following default conditions apply:

- The column heading is the text of the I-type expression, unless you use the COL.HDG or DISPLAY.NAME keywords to specify a column heading. If the text is longer than 20 characters, value marks are inserted in the text every 20 characters or at the width defined by the display format, whichever is greater. This creates a multiline column heading.
- The conversion, display format, single- or multivalue code, and association specifications are derived from the dictionary entry that defines the first field appearing in the I-type expression.
- If no field appears in the I-type expression, the temporary field has no conversion, its format is 10L, and it is single-valued.

EVALUATE

Synonym for EVAL.

EVERY

Use in a selection expression to select a record only if every value in a multivalued field meets the specified condition. EVERY must be used with the WITH keyword. For example:

```
>LIST INVENTORY WITH EVERY ITEM EQ 'PAPER'
```

EXPLODE

Use with the SEARCH command to specify that an element be included in the select list for each value in a record that matches a specified string. The select list elements also contain the field and value number in which the string was found. When the EXPLODE keyword is used, the list elements are created according to the form:

*record.id*v*value*s*field*v0

record.id is the record ID where the string is found.

field and *value* are the field and value numbers within the record containing the string.

v represents a value mark, and s represents a subvalue mark.

EXTERNAL

Use with the DEFINE.DF and REBUILD.DF commands to specify an external routine as the partitioning algorithm for a distributed file.

FILE

Use in any RetrieVe sentence to make it more English-like. This keyword is not required and is ignored by RetrieVe.

FILE.OFF

Use with the DIVERT.OUT command to suspend the diversion of command output to the current file. Subsequent command output is not diverted until a DIVERT.OUT FILE.ON command is entered.

FILE.ON

Use with the DIVERT.OUT command to resume sending command output to a file after it had been suspended by issuing a DIVERT.OUT FILE.OFF command.

FILELOCK

Use with the UNLOCK command to restrict lock removal to file locks. When combined with the SEMAPHORE *n* argument of the UNLOCK command, FILELOCK releases concurrency control semaphores that control access to the file lock table.

FIRST

Use in a RetrieVe sentence or SQL SELECT statement as a synonym for SAMPLE.

Use with the COPY command to copy the first *n* records from the source file. Its syntax is as follows:

FIRST *n*

FMT

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command to specify that the spooler controls pagination and formatting.

Use as a field qualifier in a RetrieVe sentence or SQL statement to define a format for the field name or EVAL expression it qualifies. Its syntax is as follows:

FMT "*format*"

FMT temporarily overrides the file dictionary in a RetrieVe sentence or SQL SELECT statement. An FMT clause follows the name of the field or EVAL expression it qualifies.

format specifies the width of the display column, the character used to pad the display field, the type of justification, the format of numeric data, and a format mask. *format* must be enclosed in single or double quotation marks. For full details about the syntax of the format expression, see *UniVerse BASIC Reference*.

If you specify *format* as an empty string, a default format of 10L is used. Invalid format expressions can give unpredictable results.

If you use FMT with a sort expression, RetrieVe sorts the data according to the field format specified in the FMT expression.

FOOTER

Synonym for FOOTING.

FOOTING

Use in a RetrieVe sentence or SQL SELECT statement to define a footer for the bottom of each page of your report. Its syntax is as follows:

FOOTING "[*text*] ['*options*'] [*text*] ... "

text is text you want to appear in the footing. You can intersperse options enclosed in single quotation marks anywhere in the text.

options can be any of the following:

B[*n*] Inserts the current breakpoint field value in a field of *n* spaces when used with the B option of BREAK.ON. Each new value generates a new page.

C[*n*] Centers the footing in a field of *n* spaces.

D Inserts the current date.

F[*n*] Inserts the filename left-justified in a field of *n* spaces.

G Inserts gaps in the footing format.

I[*n*] Inserts the record ID left-justified in a field of *n* spaces. Same as R.

L Inserts a carriage return and linefeed to make a multiple-line footing.

N Suppresses page pause during a terminal display.

P[*n*] Inserts the page number left-justified in a field of *n* spaces. The keyword begins with page 1 and adds 1 for each successive page.

Q Lets you use the characters] (right bracket), ^ (caret), and \ (backslash) in footing text.

R[*n*] Inserts the record ID left-justified in a field of *n* spaces. Same as I.

S Inserts the page number left-justified. One space is reserved for the number. If the number of digits exceeds 1, text to the right of the number is shifted right by the number of extra digits.

T Inserts the current time and date.

Text and options can be in any order. FOOTING displays the information in the order specified. You can use spaces anywhere in the footing text to improve readability. A space is equivalent to the width of a single screen column. The text and options must be enclosed in double quotation marks. To create a report with a footer, use a sentence like the following:

```
>LIST PAYABLES WITH PYMT.DATE <= 12/31/84 FOOTING "DECEMBER
   PAYMENTS 'D' 'P'"
```

Use the G option to add spaces to text in footings to bring the width of the line up to the device width. If you specify G once, spaces are added at that point in the line.

If you specify G more than once, spaces are distributed as evenly as possible at every point where you put a G. For example:

Specification	Result
`"Hello there"`	`|Hello there|`
`"'G'Hello there"`	`|Hello there|`
`"'G'Hello there'G'"`	`|Hello there|`
`"Hello'G'there"`	`|Hello there|`
`"'G'Hello'G'there'G'"`	`|Hello there|`

If the text includes an apostrophe that you want included in the report, type two apostrophes in succession:

```
>LIST PAYABLES WITH PYMT.DATE <= 12/31/84 FOOTING "DECEMBER''S
   PAYMENTS 'LDP'"
```

If the text includes the characters], ^, or \, specify the Q option before the first occurrence of any of these characters. You only need to specify Q once in any footing. For example:

```
FOOTING "'Q'Using ], ^, and \ in Footings"
```

FOR

Use in any RetrieVe sentence to make it more English-like. This keyword is not required and is ignored by RetrieVe.

FORCE

Use with the CATALOG command to force the replacement of an existing global catalog routine of the same name. To replace the cataloged program RECEIVABLES with an updated version, enter the following:

```
>CATALOG BP *RECEIVABLES FORCE
```

Use in any RetrieVe sentence to force the display of column headings and headers when no records are selected.

Use with the DEFINE.DF command to force a part file's number and algorithm to change even if the part file belongs to more than one distributed file.

FORM

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command to specify a special form for printing this report. The system operator is prompted to put the named form in the printer. The name can be up to six characters long, and is specified as an argument to FORM.

FORM.FEED

Use with the CP or CT command to list each record on a separate page.

FORMAT

Synonym for FMT.

FROM

Use in a RetrieVe sentence or in an NSELECT, QSELECT, or SAVE.LIST sentence to specify that the records listed in the specified numbered select list should be used. Its syntax is as follows:

FROM *n*

n is a number from 0 through 10 specifying which select list to use. To list the records from INVENTORY whose record IDs are stored in active select list 3, enter the following:

```
>LIST INVENTORY FROM 3
```

Use in a COPY sentence to specify the file from which to copy records.

Use in a T.READ sentence to specify the tape record at which to start reading.

FTN

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command to specify that reports contain FORTRAN control codes.

GE

The relational operator GREATER THAN OR EQUAL TO used in selection expressions, WHEN clauses, and IF statements. For example:

```
>SORT INVENTORY WITH NUMBER GE 100
```

GENERAL

Use with the CREATE.FILE, CONFIGURE.FILE, and RESIZE commands to specify the general hashing algorithm for dynamic (type 30) files. The SEQ.NUM keyword can be used in place of GENERAL to specify a hashing algorithm suitable for sequential numbers. GENERAL is the default hashing algorithm for dynamic files.

GRAND TOTAL

UniVerse SQL synonym for GRAND.TOTAL.

GRAND-TOTAL

Synonym for GRAND.TOTAL.

GRAND.TOTAL

Use with RetrieVe commands and the SQL SELECT statement to specify text to be printed on the grand total line of a report. Any text you specify is printed left-justified in the first column of the report. Text that exceeds the width specification for the first column is truncated. Its syntax is as follows:

GRAND.TOTAL "[*text*] ['*options*'] ..."

options are the following:

L Suppresses the double bar line above the grand total line.

P Prints the double bar line and grand total line on a separate page.

The following sentence specifies a grand total expression:

```
>LIST SUN.SPORT BY MEMBER.ID BREAK.ON MEMBER.ID TOTAL COST
   GRAND.TOTAL "Final Total"
```

GREATER

Synonym for GT.

GROUP

Use with the UNLOCK command to restrict lock removal to the group specified by its group address. Its syntax is as follows:

GROUP *group#*

GROUP.SIZE

Use with the CREATE.FILE, CONFIGURE.FILE, and RESIZE commands to specify the size of each group in a dynamic (type 30) file. Its syntax is as follows:

GROUP.SIZE { **1** | **2** }

1, the default, specifies a group size of 2048 bytes, which is equivalent to a separation of 4. The 2 specifies a group size of 4096 bytes, which is equivalent to a separation of 8.

GROUPLOCK

Use with the UNLOCK command to restrict lock removal to group locks and update record locks associated with the group. When combined with the SEMAPHORE *n* argument of the UNLOCK command, releases concurrency control semaphores that control access to the group lock table.

GT

The relational operator GREATER THAN used in selection expressions, WHEN clauses, and IF statements. For example:

```
>SORT PAYABLES WITH PYMT GT 50
```

HDR-SUPP

Synonym for HDR.SUP.

HDR.SUP

Use in a RetrieVe sentence or SQL SELECT statement to suppress the default header, which contains the sentence that you executed, the time, the date, and the page number. For example:

```
>SORT MAIL WITH STATE EQ MA HDR.SUP LPTR
```

HEADER

Synonym for HEADING.

HEADER DEFAULT

Synonym for HEADING DEFAULT.

HEADING

Use in a RetrieVe sentence or SQL SELECT statement to define a header at the top of each page of your report. This heading overrides the default heading. The default heading includes the sentence, the time, the date, and a page number. Its syntax is as follows:

HEADING "[*text*] ['*options*'] [*text*]..."

text is text to appear in the heading. You can intersperse options enclosed in single quotation marks anywhere in the text.

options can be any of the following:

B[*n*] Inserts the current breakpoint field value in a field of *n* spaces when used with the B option of BREAK.ON. Each new value generates a new page.

C[*n*] Centers heading in a field of *n* spaces.

D Inserts the current date.

F[*n*] Inserts the filename left-justified in a field of *n* spaces.

G Inserts gaps in the heading format.

I[*n*] Inserts the record ID left-justified in a field of *n* spaces. Same as R.

L Inserts a carriage return and linefeed to make a multiple-line heading.

N Suppresses page pause during a terminal display.

P[*n*] Inserts the page number left-justified in a field of *n* spaces. The keyword begins with page 1 and adds 1 for each successive page.

Q Lets you use the characters] (right bracket), ^ (caret), and \ (backslash) in heading text.

R[*n*] Inserts the record ID left-justified in a field of *n* spaces. Same as I.

S Inserts the page number left-justified. One character space is reserved for the number. If the number of digits exceeds 1, text to the right of the number is shifted right by the number of extra digits.

T Inserts the current time and date.

Text and options can appear in any order. HEADING displays the information in the order specified. You can use spaces anywhere in the heading text to improve readability. A space is equivalent to the width of a single screen column. The text and options must be enclosed in double quotation marks. To create a report with a header, use a sentence like the following:

```
>LIST PAYABLES WITH DUE.DATE <= 1/1/85 HEADING "JANUARY PAYMENTS
   'L' 'D' 'P'"
```

Use the G option to add spaces to text in headings to bring the width of the line up to the device width. If you specify G once, spaces are added at that point in the line. If you specify G more than once, spaces are distributed as evenly as possible at every point where you put a G. For example:

Specification	Result
`"Hello there"`	`|Hello there|`
`"'G'Hello there"`	`|Hello there|`
`"'G'Hello there'G'"`	`|Hello there|`
`"Hello'G'there"`	`|Hello there|`
`"'G'Hello'G'there'G'"`	`|Hello there|`

If the text includes an apostrophe that you want included in the report, type two apostrophes in a row. For example:

```
>LIST PAYABLES WITH DUE DATE <= 1/1/85 HEADING "JANUARY''S
   PAYMENTS 'LDP'"
```

If the text includes the characters], ^, or \, specify the Q option before the first occurrence of any of these characters. You only need to specify Q once in any heading. For example:

```
HEADING "'Q'Using ], ^, and \ in Headings"
```

HEADING DEFAULT

Use in a RetrieVe sentence or SQL SELECT statement to specify the default header, which contains the sentence that you executed, the time, the date, and the page number.

HEX

Use with the COPY and T.READ commands to display data in hexadecimal format.

HOLD

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command to send print jobs to the spool queue in the hold state. The jobs are not printed initially but can be printed using SP.EDIT (UNIX), SP.EDIT (Windows NT), or usm –r. The jobs can be removed from the spool queue using SP.EDIT or *usm –k*. Unlike the RETAIN

option, HOLD removes a job from the spool queue once it is printed. The HOLD option is the same as the S option of SP.ASSIGN.

ID.ONLY

Use in a RetrieVe sentence or SQL SELECT statement to display only record IDs when the fields in the @ phrase or @LPTR phrase would otherwise be displayed. However, if you use this keyword in a sentence that specifies field names for display, it is ignored. To display only record IDs instead of the fields in the @LPTR or @ phrase, use a sentence like the following:

```
>LIST PAYABLES ID.ONLY
```

ID-SUP

Synonym for ID.SUP.

ID-SUPP

Synonym for ID.SUP.

ID.SUP

Use in a RetrieVe sentence, a SQL SELECT statement, or a COPY command to suppress record IDs. Without this keyword, RetrieVe displays record IDs in the first column of a report. For example:

```
>LIST PAYABLES WITH BAL.DUE GT 10 ID.SUP
```

IN

Use in any RetrieVe sentence to make it more English-like. This keyword is not required and is ignored by RetrieVe.

IN2.FORMAT

Forces IN2-compatible format.

INFORM

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command to display spooler job numbers of newly queued jobs. The default is that INFORM is turned off.

INFORMATION.FORMAT

Use with the T.DUMP, T.LOAD, and T.WTLBL commands to specify a tape label in a format compatible with Prime INFORMATION. Prime INFORMATION systems do not write tape labels.

INPLACE

Use with the RESIZE command to resize a file in place. This is very useful when free disk space is low. To resize the file PAYABLES in its present disk location, enter the following:

```
>RESIZE PAYABLES 2 3 1 INPLACE
```

On System V systems, INPLACE moves records out of overflow blocks where possible, but does not reduce the size of the UNIX file. In some cases, it actually increases the size of the UNIX file.

INQUIRING

Use in any RetrieVe sentence to prompt for the record IDs. Enter a record ID at the `Records` prompt. To end the prompting, press **Return**. For example:

```
>LIST PAYABLES INQUIRING
```

INTERNAL

Use with the DEFINE.DF command to specify the partitioning algorithm for a distributed file.

INVISIBLE

Use in any RetrieVe sentence to make it more English-like. This keyword is not required and is ignored by RetrieVe.

IS.NULL

A relational operator used in selection expressions, WHEN clauses, and IF statements. Its syntax is as follows:

{**WITH** | **WHEN** | **IF** } *field* **IS.NULL**

IS.NULL selects all records containing the null value in *field*.

You must use the IS.NULL keyword to specify the null value in a selection expression. You cannot use the “equal to” operators, since a null value is not equal to anything, including itself.

For example:

```
>SORT INVENTORY WITH PRICE IS.NULL
```

IS.NOT.NULL

A relational operator used in selection expressions, WHEN clauses, and IF statements. Its syntax is as follows:

{**WITH** | **WHEN** | **IF** } *field* **IS.NOT.NULL**

IS.NOT.NULL selects all records that do not contain the null value in *field*.

You must use the IS.NOT.NULL keyword to specify nonnull values in a selection expression. You cannot use the “not equal to” operators, since a null value is neither equal to nor not equal to anything, including itself.

For example:

```
>SORT INVENTORY WITH PRICE IS.NOT.NULL
```

KEEP

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command to keep output files open after reports are sent to them. Use in mode 3 to append subsequent reports to the same file.

KEEP.COMMON

Use with the RUN and RAID commands. Maintains the value of unnamed common variables across BASIC programs connected with the CHAIN statement.

–L

Synonym for –LIST.

LARGE.RECORD

Use with the CREATE.FILE, CONFIGURE.FILE, and RESIZE commands to specify the size of a record ID considered too large to be included in the primary group buffer of a dynamic (type 30) file. Its syntax is as follows:

LARGE.RECORD *n*

n can be an integer or a percentage. Specified as an integer, *n* is the number of bytes a record must contain to be considered a large record. Specified as a percentage, *n* is a percentage of the group size. When the size of a record exceeds the value specified, the data for the record is placed in an overflow buffer, but the record ID is placed in the primary buffer. This method of large record storage increases access speed. The default LARGE.RECORD size is 80%.

LE

The relational operator LESS THAN OR EQUAL TO used in selection expressions, WHEN clauses, and IF statements. For example:

```
>SELECT PAYABLES WITH DUE.DATE LE 12/1/94
```

LESS

Synonym for LT.

LIKE

Synonym for MATCHING.

–LIST

Use with the commands BASIC, FORMAT, and FANCY.FORMAT to generate a listing of the program.

Use with the SPOOL command to display a listing of the spool queue.

LNUM

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command to prefix each line with its line number.

LOCAL

Use in a CATALOG command to specify that a BASIC program should be cataloged in the current account rather than in the system catalog. To catalog the subroutine OVERDUE locally, enter the following:

```
>CATALOG BP OVERDUE LOCAL
```

LOCKS

Can be included in the MASTER command for compatibility with Prime INFORMATION.

LPTR

Use in a RetrieVe sentence or SQL SELECT statement to send the results to a printer channel instead of the terminal. Its syntax is as follows:

LPTR [*n*]

n is an integer, 0 through 255. The default is 0. Printer channels are assigned with the SETPTR (UNIX) or SETPTR (Windows NT) command.

For example:

```
>LIST PAYABLES PYMT.DUE LPTR 3
```

LT

The relational operator LESS THAN used in selection expressions, WHEN clauses, and IF statements. For example:

```
>SELECT PAYABLES WITH DUE.DATE LT 12/1/94
```

MARGIN

Use in a RetrieVe sentence or SQL SELECT statement to define the width of the left margin by indenting from the left edge. If you do not use this keyword, the display is left-justified, with a left margin of 0. To change the left margin in a report, use a sentence like this:

```
>LIST PAYABLES WITH DUE.DATE <= 1/1/95 HEADER "JANUARY PAYMENTS
   'LDP'" MARGIN 5
```

MATCHES

Synonym for MATCHING.

MATCHING

A relational operator used in selection expressions, WHEN clauses, IF statements, and ReVise sentences.

Use in selection expressions, WHEN clauses, and IF statements to compare a field value or prompt response to the pattern you specify. The match is successful if the

value matches the pattern. The pattern can contain any combination of letters, numbers, or the special characters X, A, and N preceded by an integer used as a repeating factor. For example, 8N is the pattern for character strings with eight numeric characters.

The following table lists the *pattern* codes and their definitions:

Pattern	**Definition**
…	Any number of any characters (including none).
0X	Any number of any characters (including none).
*n*X	*n* number of any characters.
0A	Any number of alphabetic characters (including none).
nA	*n* number of alphabetic characters.
0N	Any number of numeric characters (including none).
*n*N	*n* number of numeric characters.
'*text*'	Exact text; any literal string (quotation marks required).
"*text*"	Exact text; any literal string (quotation marks required).

If *n* is longer than nine digits, it is used as text in a pattern rather than as a repeating factor for a special character. For example, the pattern 1234567890N is treated as a literal string, not as a pattern of 1,234,567,890 numeric characters.

You can specify a match on a string at the beginning, end, or anywhere in the field. If the pattern contains any special characters (such as * or –) or a blank space, enclose the entire pattern in quotation marks and the string in another set of quotation marks. The pattern has one of the following syntaxes:

string **…**	Matches records with a field beginning with *string*.
… *string* **…**	Matches records with *string* anywhere in the field.
… *string*	Matches records with a field ending with *string*.
string1 **…** *string2*	Matches records with a field beginning with *string1*, ending with *string2*, and containing any number of characters between them.

The three dots are part of the syntax and must be typed.

In a ReVise sentence MATCHING tells ReVise to accept only information matching the pattern as a new value for the specified field. Its syntax is as follows:

field { **MATCHING** | **MATCHES** | **LIKE** } *pattern*

field is one of the field names in the ReVise sentence. ReVise prompts only for the specified field unless you specify additional fields in the ReVise sentence. You can use more than one MATCHING clause in a ReVise sentence.

To create a select list with zip codes beginning with 01, enter the following:

```
>SELECT MAIL WITH ZIP MATCHING 01...
```

To create a report showing only information for vendors with AC in the vendor code, enter the following:

```
>LIST PAYABLES WHEN CODE MATCHING ...AC...
```

To execute a different sentence for all entries with zip codes ending in 67, use an IF statement such as the following in a paragraph:

```
IF <<ZIP>> MATCHING ...67  THEN GO ZIP67
```

In the following example, the date you enter into the MEMBERSHIP file must begin with FEB:

```
>REVISE MEMBERSHIP DATE MATCHING FEB...
```

MAX

Use in a RetrieVe sentence to calculate and list the maximum value of a field in a set of records. Its syntax is as follows:

MAX *field.expression* [**NO.NULLS**]

field.expression specifies the name of a field or an EVAL expression for which you want to display the maximum value.

NO.NULLS tells RetrieVe to ignore empty string values.

The maximum value is the value that appears first when you use a RetrieVe sort by descending order on the field. This is based on the field's justification in the dictionary or the justification specified by the FMT keyword. This means that you can use the MAX keyword on alphabetic field values as well as numeric values.

When you use NO.NULLS in the sentence, RetrieVe ignores field values that contain empty string values. If you use NO.NULLS and all the fields you select have empty string values, an empty string value is listed as the maximum.

The output format depends on the justification defined in the dictionary definition of the field. If the field uses the default column header, the MAX keyword is added before the column header.

If you specify a multivalued field, RetrieVe treats each value separately.

If you use the MAX keyword with a breakpoint keyword (BREAK.ON or BREAK.SUP), RetrieVe displays the field values for each record on the detail lines and the maximum breakpoint value for each breakpoint in addition to the overall maximum value at the bottom of the report.

For example, to display each salary in the records of the PERSONNEL file with the maximum salary at the bottom of the report, enter the following:

```
>LIST PERSONNEL LAST.NAME MAX SALARY
```

ME

Use with the STATUS command to display information about your current processes.

MERGE.LOAD

Use with the CREATE.FILE, CONFIGURE.FILE, and RESIZE commands to specify the level at which a dynamic (type 30) file's modulo is decreased by one. Its syntax is as follows:

MERGE.LOAD *n*

n is a number indicating a percentage of the space allocated for the file. The default MERGE.LOAD is 50%. When the data in the file is less than the percentage, the data in the last group of the file is merged with another group, to decrease the modulo by one.

MIN

Use in a RetrieVe sentence to calculate and list the minimum value of a field in a set of records. Its syntax is as follows:

MIN *field.expression* [**NO.NULLS**]

field.expression specifies the name of a field or an EVAL expression for which you want to list the minimum value. RetrieVe treats nonnumerics as zero values.

NO.NULLS tells RetrieVe to ignore empty string values.

The minimum value is the same as the first value that appears when you use a RetrieVe sort on the field depending on the specified justification. This means that you can use the MIN keyword on alphabetic field values, as well as numeric values.

When you use the NO.NULLS keyword, RetrieVe ignores fields containing an empty string value. However, if you use NO.NULLS and all the fields you select have empty string values, an empty string value is listed as the minimum.

The output format of the display depends on the justification specified in the file dictionary. If the field uses the default column header, MIN is added before the column header.

If you specify a multivalued field, RetrieVe treats each value separately.

If you use the MIN keyword with a breakpoint keyword (BREAK.ON or BREAK.SUP), RetrieVe displays the field values for each record on detail lines with the minimum breakpoint value for each breakpoint in addition to the overall minimum value at the bottom of the report.

For example, to display each salary in the records of the PERSONNEL file with the minimum salary at the bottom of the report, excluding empty string values, enter the following:

```
>LIST PERSONNEL LAST.NAME MIN SALARY NO.NULLS
```

MINIMIZE.SPACE

Use with the CREATE.FILE, CONFIGURE.FILE, and RESIZE commands to specify that the values for split load, merge load, and the large record size be calculated to optimize the amount of space required by a dynamic (type 30) file at the expense of access time. If you specify a value for split load, merge load, or large record size, the value you specify overrides the value calculated by MINIMIZE.SPACE. If MINIMIZE.SPACE and RECORD.SIZE are specified, the value for the large record size calculated by MINIMIZE.SPACE is used instead of the value calculated by RECORD.SIZE.

MINIMUM.MODULUS

Use with the CREATE.FILE, CONFIGURE.FILE, and RESIZE commands to specify the minimum modulo of a dynamic (type 30) file. Its syntax is as follows:

MINIMUM.MODULUS *n*

n is an integer of 1 (the default) or greater. This value is also the initial value of the modulo of the dynamic file.

MTU

Specifies the magnetic tape unit and needs to be used only if you have more than one tape drive or if you want to change the mode. Its syntax is as follows:

MTU [*mtu*]

If you do not use the optional *mtu* qualifier, the default 000 is used.

Letter	Meaning	Possible Values
m	Mode	0 - ASCII, no conversions 1 - EBCDIC conversion 2 - invert high order bit 3 - invert high order bit and EBCDIC conversion
t	Tracks	Not used
u	Unit number	Any number from 0 through 7 indicating the tape drive number

MTU can be used with T.DUMP and T.LOAD, the commands to create and restore magnetic tape records.

To use MTU in a T.DUMP sentence, enter a sentence similar to this:

```
>T.DUMP PAYABLES MTU 001
```

If you create tapes on a UniVerse system that are to be used on a Prime system, or vice versa, specify *mtu* as 200 in order to invert the high order bit.

MULTI.VALUE

Use as a field qualifier in a RetrieVe sentence or SQL SELECT statement to specify that a field name or EVAL expression be treated as multivalued. The MULTI.VALUE keyword always follows the name of the field or EVAL expression. MULTI.VALUE overrides any existing specification in field 6 of the file dictionary. See also the SINGLE.VALUE keyword.

You cannot use MULTI.VALUE in the same field expression with the SINGLE.VALUE field qualifier.

MULTIVALUED

Synonym for MULTI.VALUE.

NE

The relational operator NOT EQUAL used in selection expressions, WHEN clauses, and IF statements. For example:

```
>SORT INVENTORY WITH ITEM NE 'SHIRTS'
```

NETWORK

Use with the STATUS command to display node information about the system.

NEW.PAGE

Use with the COPY command to list each record on a separate page.

NEXT

Use with the BANNER keyword in the SETPTR (UNIX) or SETPTR (Windows NT) command to specify a unique record ID in the &HOLD& file for each new report.

NEXT.AVAILABLE

Use in a ReVise sentence to tell ReVise to use the next sequential value for the record ID every time you press **Return** at the `RECORD ID=` prompt.

When you first use the NEXT.AVAILABLE keyword, ReVise creates the &NEXT.AVAILABLE& record in the dictionary and gives it the value 1. This is an X-type dictionary record. You can change the next available number at any time using either ReVise or ED. You can put the NEXT.AVAILABLE keyword in the @REVISE phrase.

Every time you use NEXT.AVAILABLE, ReVise automatically adds 1 to the value in the &NEXT.AVAILABLE& record. ReVise then verifies that the value does not exist already. If it does, ReVise continues to add 1 to the value until it comes to an unused value and assigns it as the record ID.

If you enter a value instead of pressing **Return**, ReVise uses the value you enter.

ReVise uses the next sequential ID when you press **Return** to enter data in the INVENTORY file:

```
>REVISE INVENTORY NEXT.AVAILABLE
```

NFMT

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command to allow the application to control pagination and formatting instead of the spooler.

NHEAD

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command to suppress printing of the banner.

NO

Synonym for NE (not equal).

NO.INDEX

Use in a RetrieVe command to specify that secondary key indices not be used if they exist. This is useful when indices are not up to date or built.

NO.MATCH

Use with the SEARCH command to specify that only records not containing any of the specified strings should be selected.

NO.NEW

Use with the COPY command to copy a record only if a record with the same record ID exists in the target file. The new record overwrites the old.

NO.NULLS

Use with the CREATE.INDEX command to specify that empty secondary key values are not to be indexed in the newly created indices. You can save disk space and processing time using this facility, but reports generated from empty-string-suppressed secondary keys do not contain values for the empty keys.

Use with the AVG, ENUM, MAX, and MIN aggregate function keywords, and with the SAVING clause of the SELECT and SSELECT commands, to suppress empty string values.

NO.PAGE

Synonym for NOPAGE.

NO.SELECT

Use with the SEARCH command to specify that a list of the record IDs be displayed instead of a select list being created.

NO.SPLIT

Use with a LIST or SORT command to start a record on a new page if it does not fit on the current page of a report.

NO.WAIT

Use in a LOCK sentence to return control to the command processor if the specified lock is already set. If this option isn't used, LOCK waits for the other user to release the lock. To return control to the command level if LOCK number 42 is set, use a sentence like the following:

```
>LOCK 42 NO.WAIT
```

NO.WARN

Use with the RUN and RAID commands to suppress all warning (nonfatal) error messages. If NO.WARN is not specified, the terminal screen prints run-time error messages as they are encountered.

NODE

Use with the UNLOCK command to restrict lock removal to the network node specified by its argument.

NODEFAULT

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command to change only those parameters specified with your command and not supply default settings for unspecified parameters.

NOEJECT

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command to indicate not to skip to a new page at the end of a report.

NOFMT

Synonym for NFMT.

NOHEAD

Synonym for NHEAD.

NOHOLD

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command to turn off the HOLD option.

NOKEEP

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command to close output files after reports are sent to them.

NOPAGE

Use in a RetrieVe sentence or SQL SELECT statement to scroll the output on the screen and not stop at page breaks. Without NOPAGE, RetrieVe displays a page of information and the following message:

```
Press any key to continue...
```

To display the next screen, press any key. To return to the UniVerse prompt without displaying the next screen, press **Q** or **Ctrl-X**. The page size is set to 24 lines per screen, although you can change this value using the TERM command.

For example:

```
>LIST PAYABLES PYMT.DATE NOPAGE
```

NORETAIN

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command to turn off the RETAIN option.

NOT

Synonym for NE.

NOT.MATCHING

A relational operator used in selection expressions, WHEN clauses, IF statements, and ReVise sentences. NOT.MATCHING is the inverse of MATCHING.

Use in selection expressions, WHEN clauses, and IF statements to compare a field value or prompt response to the pattern you specify. The match is successful only if the value does not match the pattern. The pattern can contain any combination of letters, numbers, or the special characters X, A, and N preceded by an integer used as a repeating factor. For example, 8N is the pattern for character strings with eight numeric characters.

The following table lists the *pattern* codes and their definitions:

Pattern	Definition
…	Any number of any characters (including none).
0X	Any number of any characters (including none).
*n*X	*n* number of any characters.
0A	Any number of alphabetic characters (including none).
nA	*n* number of alphabetic characters.
0N	Any number of numeric characters (including none).
*n*N	*n* number of numeric characters.
'*text*'	Exact text; any literal string (quotation marks required).
"*text*"	Exact text; any literal string (quotation marks required).

If *n* is longer than nine digits, it is used as text in a pattern rather than as a repeating factor for a special character. For example, the pattern 1234567890N is treated as a literal string, not as a pattern of 1,234,567,890 numeric characters.

If the pattern contains any special characters (such as * or –) or a blank space, enclose the entire pattern in quotation marks and the string in another set of quotation marks. The pattern has one of the following syntaxes:

string **…**	Matches records with a field beginning with *string*.
… *string* **…**	Matches records with *string* anywhere in the field.
… *string*	Matches records with a field ending with *string*.
string1 **…** *string2*	Matches records with a field beginning with *string1*, ending with *string2*, and with any number of characters between them.

The three dots are part of the syntax and must be typed.

Used in a ReVise sentence, NOT.MATCHING tells ReVise to accept only information that does not match the pattern as a new value for the specified field. Its syntax is as follows:

field { **NOT.MATCHING** | **UNLIKE** } *pattern*

field is one of the field names in the ReVise sentence. ReVise prompts only for the fields whose names do not match *pattern* unless you specify additional fields in the ReVise sentence. You can use more than one NOT.MATCHING clause in a ReVise sentence.

To create a select list that does not include zip codes beginning with 11, enter the following:

```
>SELECT MAIL WITH ZIP NOT.MATCHING 11...
```

To create a report that does not include information for vendors with AC in the vendor code, enter the following:

```
>LIST PAYABLES WHEN CODE NOT.MATCHING ...AC...
```

To execute a different sentence for all entries that do not have a zip code ending in 42, use the following IF statement in a paragraph:

```
IF <<ZIP>> NOT.MATCHING ...42  THEN GO NOT42
```

NOXREF

Use in a CATALOG sentence to catalog the program without the cross-reference table and symbol table information. To catalog the program UPDATE.FILES without its cross-reference and symbol tables, enter the following:

```
>CATALOG BP UPDATE.FILES NOXREF
```

NUM.SUP

Use with the COPY command to suppress line numbers.

OF

Use in any RetrieVe sentence to make it more English-like. This keyword is not required and is ignored by RetrieVe.

OFF

Use with commands such as BREAK or DIVERT.OUT to stop or disable a process or function.

ON

Use with commands such as BREAK or DIVERT.OUT to begin or enable a process or function.

ONLY

Synonym for ID.ONLY.

OR

Logical operator OR used to join selection expressions, WHEN clauses, and IF statements. For example:

```
>LIST MAIL WITH STATE EQ MA OR INTEREST EQ PAINT
```

OVERWRITING

Use with commands such as T.LOAD or COPY to overwrite records that exist in the target file. If you do not use this keyword in your sentence, T.LOAD or COPY examines the target file and does not copy a record if a record with the same record ID already exists. For example:

```
>T.LOAD PAYABLES OVERWRITING
```

PCT

Synonym for PERCENT.

PDICT

Use with a filename to specify a Pick-style file dictionary rather than the data file. PDICT causes the Pick dictionary, as specified by the P_*filename* in field 5 of the VOC entry, to be displayed using the DICT.PICK file rather than the DICT.DICT file. Specify PDICT immediately before the filename. For example:

```
>REVISE PDICT PAYABLES
```

```
>LIST PDICT PAYABLES WITH TYPE EQ PH
```

PERCENT

Use in a RetrieVe sentence or SQL SELECT statement to calculate percentages for a numeric field. It calculates the total value of the specified field for all records, then calculates and displays the percent of the total value of the specified field for each record. Its syntax is as follows:

PERCENT ['*n*'] *field*

The option *n* is an integer from 0 through 5 that must be enclosed in single quotation marks. This integer specifies the number of digits to be displayed after the decimal point. If you do not use this option, two digits are displayed.

field is the name of the field you want to find percentages for.

For example:

```
>LIST INVENTORY TOTAL GAMES PERCENT GAMES
```

PERCENT.GROWTH

Use with the HASH.HELP command to change allowance for file growth.

PERCENTAGE

Synonym for PERCENT.

PICK.FORMAT

Use with the T.DUMP, T.LOAD, and T.WTLBL commands to specify a tape label in a format compatible with Pick systems. The label includes the time and date. With the T.WTLBL command text can follow the PICK.FORMAT keyword to be included in the label.

Pick labels (including ADDS Mentor and Ultimate) are 80 bytes long and have the following format (❒ represents an ASCII blank, **I** represents an item mark, and **F** represents a field mark):

I L ❒ *xxxx* ❒ *HH*:*MM*:*SS*
❒ *DD* ❒ *MMM* ❒ *YYYY*
❒ *filename* ❒ *header pad* **F** *rr*

I	Item mark (segment mark)
L	ASCII character L
xxxx	Tape record size (hexadecimal)
HH:*MM*:*SS*	Time (external 24-hour)
DD MMM YYYY	Date (external form)
filename	Name of the file dumped
header	(Optional) Label header text
pad	Enough blanks to get to byte 78
F	Field mark (attribute mark)
rr	Reel number (hexadecimal)

PRINT

Use in any RetrieVe sentence to make it more English-like. This keyword is not required and is ignored by RetrieVe.

PRINTER

Synonym for AT.

PRIORITY

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command to specify priority for printing. The highest priority is 1 and the lowest is 255. The priority you enter is converted to a number within the range for Windows NT, which goes from 99 through 1. Because the range of priorities in UniVerse goes from 1 through 254, the mapping is not one to one. The following list shows the conversion of UniVerse priorities to Windows NT priorities:

Priority in UniVerse	Priority in Windows NT
1	99
2	98
.	.
.	.
.	.
10	90
11	89
12	89
13	89
14	88
15	88
16	88
17	87
.	.
.	.
.	.
244	11
245	10
246	9
247	8
.	.
.	.
.	.
254	1

PROGRAMSIZE

Use with the LIMIT command to set the total size of user memory space for storing active BASIC routines. When a routine exceeding the size specified with PROGRAMSIZE is loaded into user memory space, UniVerse tries to unload the least recently used programs to bring the total usage within the limit. Size is specified as a number of 1024-byte units. A value of 0 specifies unlimited space.

PROMPT

Use with the LOCK command to return control to the command processor so that a user can execute other commands. When the lock becomes free, it is set and a message is issued indicating that the lock is now set. You are not notified until the next prompt unless you specify NOTIFY ON.

READU

Use with the UNLOCK command to restrict lock removal to update record locks.

REALITY.FORMAT

Use with the T.DUMP, T.LOAD, and T.WTLBL commands to specify a tape label in a format compatible with REALITY systems. The label includes the time and date. With the T.WTLBL command, text can follow the REALITY.FORMAT keyword to be included in the label.

REALITY labels are 78 bytes long and have the following format (❒ represents an ASCII blank, **I** represents an item mark, **F** represents a field mark, and **V** represents a value mark):

I L *header* **V** *HH*:*MM*:*SS*
❒ *DD* ❒ *MMM* ❒ *YYYY*
F *rr* **F** *xxxxx* **F** **I** *pad*

I	Item mark (segment mark)
L	ASCII character L
header	(Optional) Label header text (<= 44 characters)
V	Value mark (follows L if no header)
HH:*MM*:*SS*	Time (external 24-hour)
DD MMM YYYY	Date (external form)
F	Field mark (attribute mark)
rr	Reel number (decimal)
xxxxx	Tape record size (decimal)
pad	Fill blanks up to 78 bytes

RECORD.SIZE

Use with the CREATE.FILE, CONFIGURE.FILE, and RESIZE commands to specify that the values for group size, and large record size for a dynamic (type 30) file should be calculated based on the value of the estimated average record size specified. Its syntax is as follows:

RECORD.SIZE *n*

n is your estimate of the average record size for the dynamic file, specified in bytes. RECORD.SIZE does not limit the size of records. If you specify a value for group size, or large record size, the value you specify overrides the value calculated by RECORD.SIZE.

REMOVING

Use with the DEFINE.DF command to remove a part file from a distributed file.

REPORTING

Use with the COPY command to display the status of the OVERWRITE, UPDATING, and DELETING options, and record IDs of the source records and the record IDs of the copies.

REQUEUE

Synonym for RETAIN.

REQUIRE.INDEX

Use in a RetrieVe command to specify that secondary key indices must be used to process the sentence. If indices cannot be used, an error message appears and the sentence does not proceed.

REQUIRE.SELECT

Use with any RetrieVe sentence when you want to process a select list. This keyword requires an active select list in order to run the process. If a select list is not active, a message like the following appears:

```
No active list found, processing terminated.
```

If that happens, use SELECT, SSELECT, QSELECT, FORM.LIST, or GET.LIST to make a select list active, then repeat the selection sentence.

For example:

```
>LIST PAYABLE REQUIRE.SELECT
```

RETAIN

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command to hold jobs in the spool queue after printing them. Held jobs can be reprinted using usm with the *–r* option or by using the SP.EDIT (UNIX) or SP.EDIT (Windows NT) command. Reprinting the job does not remove it from the spool queue. Held jobs can be removed from the spool queue using the *–k* option of *usm*, or by using the SP.EDIT command. The RETAIN option is the same as the H option of SP.ASSIGN.

Use with the DEFINE.DF command to retain a part file's number and algorithm in the part file after it is removed from a distributed file.

SAID

A relational operator used in WITH expressions, WHEN clauses, and IF statements to select values that sound like the specified value. The specified value must begin with the same letter as the value. To create a list of all names like Paine, Payne, Pane, and so on, enter the following:

```
>LIST PAYABLES WITH LNAME SAID PAIN
```

SAMPLE

Use in a RetrieVe command to limit the number of records selected. Its syntax is as follows:

SAMPLE [*n*]

n is a number specifying the upper limit on the number of records selected. The first *n* records are selected. It is useful to list part of a long report in order to check the formatting. To list the first five records in the INVENTORY file, enter the following:

```
>LIST INVENTORY SAMPLE 5
```

SAMPLED

Use in a RetrieVe command to limit the number of records selected. SAMPLED selects every *n*th record, whereas SAMPLE selects the first *n* records. Its syntax is as follows:

SAMPLED [*n*]

n is the number specifying how often to select a record.

SAVING

Use with SELECT, SSELECT, or QSELECT to create a list containing field values instead of record IDs. If you have field values that are also record IDs in another file, this is useful. The syntax in SELECT or SSELECT sentences is as follows:

SAVING [**UNIQUE**] *field*

To create a list of names using the ACCOUNTS file based on the amounts due in the PAYABLES file, you could use a sentence like the following:

```
>SELECT PAYABLES WITH AMT.DUE > 1 SAVING NAMES
```

The UNIQUE keyword omits duplicate values in the saved field from the select list.

The syntax in a QSELECT sentence is as follows:

SAVING *n*

n is the number of the field whose values are to make up the select list.

If you specify multiple SAVING clauses in a SELECT or SSELECT sentence, the entire value of each field becomes an element in the select list. Value marks separate multiple values, subvalue marks separate subvalues.

If you specify multiple SAVING clauses in a QSELECT sentence, each value and subvalue becomes an element in the select list.

SELECT.ONLY

Synonym for REQUIRE.SELECT.

SEQ.NUM

Use with the CREATE.FILE, CONFIGURE.FILE, and RESIZE commands to specify the sequential numeric hashing algorithm for dynamic (type 30) files. The sequential numeric hashing algorithm should be used only for files with record IDs that are mainly numeric, sequential, and consecutive. For other files use the GENERAL keyword to specify the general hashing algorithm. GENERAL is the default hashing algorithm for dynamic files.

SINGLE.VALUE

Used as a field qualifier in a RetrieVe sentence or SQL SELECT statement, SINGLE.VALUE specifies that the fieldname or EVAL expression it qualifies be treated as single-valued. The SINGLE.VALUE keyword always follows the name

of the field or EVAL expression. SINGLE.VALUE overrides any existing specification in field 6 of the file dictionary. See also the MULTI.VALUE keyword.

You cannot use SINGLE.VALUE in the same field expression with the MULTI.VALUE, ASSOC, or ASSOC.WITH field qualifiers.

SINGLEVALUED

Synonym for SINGLE.VALUE.

SOME

Use in any RetrieVe sentence to make it more English-like. This keyword is not required and is ignored by RetrieVe.

SPLIT.LOAD

Use with the CREATE.FILE, CONFIGURE.FILE, and RESIZE commands to specify the level at which a dynamic (type 30) file's modulo is increased by one. Its syntax is as follows:

SPLIT.LOAD *n*

n is a number indicating a percentage of the space allocated for the file. The default SPLIT.LOAD is 80%. When the data in the file exceeds the percentage, the data in one of the groups is divided equally between itself and a new group, to increase the modulo by one.

SPOKEN

Synonym for SAID.

–SPOOL

Use with the BASIC command to generate a listing of the program, and spool it directly to the printer rather than to a file.

SQUAWK

Use with the COPY command to display a message for each record copied, indicating the record ID of the source record, the record ID of the copy, and the status of the OVERWRITE and DELETING options. To copy the file CUR.ACCOUNTS to

the file OLD.ACCOUNTS and list each record ID as it is copied, enter the following:

```
>COPY FROM CUR.ACCOUNTS TO OLD.ACCOUNTS ALL SQUAWK
```

Use with the PHANTOM command to display the record ID of the record created in the &PH& file by the phantom process. For example:

```
>PHANTOM SQUAWK RUN BP TEST
RUN_54385_10131 record has been created in the '&PH&' file.
```

Use with the SEARCH command to display a message for each record selected.

STARTPAGE

Use with the SETPTR (UNIX) or SETPTR (Windows NT) command to specify starting page number for printing.

STATISTICS

Use with the LIST.INDEX command to specify that additional information about the secondary key index should be displayed, including the total number of keys, records per key, and index size. Each specified index must be scanned to gather the data, so this process may take a while for large files.

Use with the ANALYZE.FILE command to display additional information in the report for each file. The data displayed with the STATISTICS keyword takes additional time to compile. While the data is compiled, a progress report on data compilation is displayed. After the data is compiled, you are asked to press **Return** to continue. The next page of information contains the information from the standard report, as well as the total number of records, the number of large records, the number of deleted records, the total size of the record data and record IDs, the unused space, and the total space for records. Press **Return** to get the next screen of information.

The third page of the report displays information about records and groups. The average, minimum, maximum, and standard deviation of the number in all groups of disk records, records, large records, deleted records, data bytes, record ID bytes, unused bytes, and total bytes are displayed. The average, minimum, maximum, and standard deviation of the number in all records of data bytes, record ID bytes, unused bytes, and total bytes are displayed.

STATS

Synonym for STATISTICS.

SUPP

Synonym for HDR.SUP.

SUPPRESS COLUMN HEADER

UniVerse SQL synonym for COL.HDR.SUPP.

SUPPRESS COLUMN HEADING

UniVerse SQL synonym for COL.HDR.SUPP.

SUPPRESS DETAIL

UniVerse SQL synonym for DET.SUP.

SYSTEM

Use with the DEFINE.DF command to specify the default partitioning algorithm for a distributed file.

TAPE

Direct output of REFORMAT and SREFORMAT commands to tape.

TEMPL

Synonym for USING.

THAN

Use in any RetrieVe sentence to make it more English-like. This keyword is not required and is ignored by RetrieVe.

THE

Use in any RetrieVe sentence to make it more English-like. This keyword is not required and is ignored by RetrieVe.

THEN

Use in any RetrieVe sentence to make it more English-like. This keyword is not required and is ignored by RetrieVe.

TO

Use in a SELECT, SSELECT, QSELECT, NSELECT, GET.LIST, FORM.LIST, SEARCH, or ESEARCH sentence to specify which select list to write the list to. The syntax for a select expression is as follows:

TO *n*

n is a number from 0 through 10 specifying which select list should be used.

Use in a COPY sentence to specify the file to copy records to. In this case the syntax is as follows:

TO *target.file*

target.file is the file you are copying records to.

To select records with a payment date after 2/1/92 to select list 5, enter the following:

```
>SELECT PAYABLES WITH PYMT.DATE > 2/1/92 TO 5
```

To copy records from ACCOUNTS to ACCOUNTS.TMP, enter the following:

```
>COPY FROM ACCOUNTS TO ACCOUNTS.TMP
```

Use in a T.READ sentence to specify the tape record at which to stop reading.

Use in an ASSIGN or T.ATT sentence to specify the logical device to which you are assigning a physical device.

Use in a CNAME sentence to specify the new name of a file or record.

TOTAL

Use in a RetrieVe sentence or SQL SELECT statement to calculate and display totals for numeric fields. This keyword is often used with breakpoints to produce subtotals. The TOTAL keyword is not the same as the TOTAL function used in I-descriptors and with the CALC keyword, although in some cases it can produce the same result. Its syntax is as follows:

TOTAL *field*

field is the name of the field you want to total.

When TOTAL is used in a breakpoint sentence, put TOTAL immediately before the field it is to total. TOTAL displays the subtotal for each value under the row of dashes (----) that indicates the breakpoint. If a breakpoint consists of only one line, the subtotal is the same as the detail value.

The grand total for the field is displayed on the last page of the report under a row of equal signs (====).

The following example lists unit price subtotals for each product in the PAYABLES file, and lists a grand total at the end of the report:

```
>LIST PAYABLES BY PRODUCT BREAK.ON PRODUCT TOTAL UNIT.PRICE
```

TRANSPORT

Use in a RetrieVe sentence to display the last value for a specified field in a set of records. Its syntax is as follows:

TRANSPORT *field.expression*

field.expression specifies the name of a field or an EVAL expression for which you want to list the last value.

If the field uses the default column header in the report, the TRANSPORT keyword is added before the column header.

If you specify a multivalued field, RetrieVe treats each value separately and lists the last value of the multivalues.

If you use the TRANSPORT keyword with a breakpoint keyword (BREAK.ON or BREAK.SUP), RetrieVe displays the last value for each breakpoint in addition to the overall last value at the bottom of the report.

For example, to display all the last names in the PERSONNEL file, listing the last value at the bottom of the report, enter the following:

```
>LIST PERSONNEL TRANSPORT LAST.NAME
```

TRAP

Use with the RUN and RAID commands to cause the RAID debugger to be entered when a warning message appears during run time.

TRUNCATE

Use with the DIVERT.OUT command to delete any remaining part of an existing record which has not been overwritten by the current output diversion. The end of the record is at the end of the current output diversion. The TRUNCATE option should be specified when the output record already exists and the current diversion does not entirely overwrite the previous contents; otherwise the existing record is not cleared.

TTY.OFF

Use with the DIVERT.OUT command to turn off terminal (tty) display of diverted output. User input is also turned off.

TTY.ON

Use with the DIVERT.OUT command to turn on terminal output display if it has been disabled by the TTY.OFF keyword.

TYPE

Synonym for FORM.

UNIQUE

Use with the SAVING keyword to prevent duplicates in a list of values other than record ID values. UNIQUE gives an error message unless SAVING is also in the sentence. SAVING UNIQUE also sorts on the specified field.

To create the same list as above with only unique values, use a sentence like the following:

```
>SELECT PAYABLES WITH AMT.DUE > 1 SAVING UNIQUE NAMES
```

Use with the BANNER keyword in a SETPTR sentence to specify a unique &HOLD& record at each invocation of SETPTR.

UNLIKE

Synonym for NOT.MATCHING.

UP

Use with the CHAP command to raise execution priority. If you are not in the UV account, CHAP UP has no effect.

UPDATING

Use with the COPY command to copy a record only if a record with the same record ID exists in the target file. The new record overwrites the old.

USER

Use with the UNLOCK command to restrict lock removal to the locks of a particular user. A user's number can be obtained from the output of LIST.READU.

USERS

Use with the STATUS command to display information about all user processes.

USING

Use with RetrieVe commands and SQL statements to specify an alternate dictionary to be used as the file dictionary. Its syntax is as follows:

USING [**DICT** | **PDICT**] *filename*

filename is the name of the file to use as the alternate dictionary. If you specify DICT or PDICT, you use the dictionary of *filename*, otherwise you use the data file. USING can be put anywhere in the RetrieVe sentence but can only appear once.

Use with the REVISE command to specify a process definition to be used for prompting. The process must exist in the file REVISE.PROCESSES. To use the process ENTER.DICT, enter the following:

```
>REVISE DICT MYFILE USING ENTER.DICT
```

Use with the RESIZE command to specify a pathname specifying a work area for RESIZE to use when creating temporary files required to resize a file.

VERIFIELD

Use in a ReVise sentence to display values from a verification file. VERIFIELD must be used with either the VERIFY or VERIFILE keywords. Its syntax is as follows:

VERIFIELD *display.field*

display.field is the name of the field in the verification file to display when the entered value matches a record ID in the verification file.

When you use VERIFIELD, you cannot use VERIFY or VERIFILE to verify that values do *not* exist in the verification file.

To display account number values from ACCOUNTS when entering data to PAYABLES, use a sentence like the following:

```
>REVISE PAYABLES VENDOR VERIFY ACCOUNTS VERIFIELD ACCT.NO
```

VERIFILE

Synonym for VERIFY.

VERIFY

Use in a ReVise sentence to verify that the information you are entering for a field does or does not match a record ID of another file.

To enter only values that match record IDs in another file, use the following syntax:

REVISE *filename* [*fields*] *verifield* **VERIFY** *verifile*

filename is the file whose records you are adding or changing.

fields are the names of fields to prompt for.

verifield is either the name of a field in the current file whose data is being validated or the name of the record ID field (@ID) in the current file.

field If you use a field name, ReVise verifies that the value entered in *verifield* is also a record ID in *verifile*.

record.ID If you use the record ID field name, ReVise verifies that the entered value is *not* a record ID in *verifile*. If the ReVise sentence also includes a VERIFIELD expression, ReVise verifies that the record ID entered *is* a record ID in *verifile* and displays the value of the VERIFIELD display field.

verifile is the name of the verification file, whose record IDs validate the data entered in *verifield*.

A value entered at the VENDOR prompt must be a record ID in the ACCOUNTS file:

```
>REVISE PAYABLES VENDOR VERIFY ACCOUNTS
```

To enter in the INVENTORY file only values that are not record IDs in the PAYABLES file, use a sentence like the following:

```
>REVISE INVENTORY @ID VERIFY PAYABLES
```

VERT

Synonym for VERTICALLY.

VERTICALLY

Use to display the output in a vertical format, with each field on a separate line. There is no spacing or formatting between lines. If a multivalued field is displayed, the information is displayed in a column. If multivalued fields are associated, the information is displayed next to each other in columns.

If the information is too wide to fit across the screen in columns, RetrieVe automatically displays it in vertical format. For example:

```
>LIST PAYABLES WITH PYMT.DATE EQ 6 "2/12/85" VERTICALLY
```

The VERTICALLY keyword suppresses the printing of breakpoint text.

WHEN

Use in a RetrieVe sentence to limit output to values or subvalues in a multivalued field that meet specified criteria. Its syntax is as follows:

WHEN *mvfield operator* { *values* | *field2* }
[[{ **AND** | **OR** } *mvfield operator*] { *values* | *field2* } ...]

mvfield is the multivalued field to be checked for the condition. *operator* is a relational operator (see Table 2-1 for a list of relational operators).

values are one or more constants. If a value contains delimiters or spaces, you must enclose it in quotation marks. The constants are compared with the values in *mvfield*. If you specify more than one value, the OR operator is assumed; that is, the condition:

mvfield operator value1 value2

means:

mvfield operator value1 **OR** *mvfield operator value2*

If you use the NE or UNLIKE operator (or their synonyms), specify only one constant.

field2 is the name of a single-valued or multivalued field whose values are compared to the values in *mvfield*.

If you use more than one WHEN clause in a sentence, and they are not joined with AND or OR, AND is assumed; that is, the sentence:

LIST *filename* **WHEN** *mvfield operator value* **WHEN** *mvfield operator value*

means:

LIST *filename* **WHEN** *mvfield operator value* **AND WHEN** *mvfield operator value*

If you use WHEN and WITH in the same sentence, RetrieVe first selects records according to the selection criteria specified in the WITH clause, then limits output to lines meeting the print-limiting criteria specified in the WHEN clause.

To list a subset of values in the multivalued INTERESTS field, use a sentence like the following:

```
>LIST SUN.MEMBER WHEN INTERESTS EQ FISHING
```

To list values with a balance due when the product is office supplies, use a sentence like the following:

```
>LIST PAYABLES WITH BAL.DUE > 0 WHEN PRODUCTS EQ OFFICE.SUP
```

WITH

Use in a RetrieVe sentence to select records whose data meets specified criteria. Its syntax is as follows:

WITH [**EVERY**] *field1 operator* { *values* | *field2* }
[{ **AND** | **OR** } [**EVERY**] *field1 operator* { *values* | *field2* } . . .]

field1 is the field to be checked for the condition. *operator* is a relational operator (see Table 2-1 for a list of relational operators).

values are one or more constants. If a value contains delimiters or spaces, you must enclose it in quotation marks. The constants are compared with the values in *field1*. If you use the NE or UNLIKE operator (or their synonyms), specify only one constant.

field2 is the name of a field whose values are compared to the values in *field1*.

You can use more than one WITH expression in a sentence. If no parentheses are used, records are selected by their first WITH condition, then by the second, and so on. You can alter this order by using parentheses.

To select all records with balances over 50, use a sentence like the following:

```
>SELECT PAYABLES WITH BAL.DUE > 50
```

To list all records with balances over 50 and a list payment date before 2/1/95 or after 2/28/95, use a sentence like the following:

```
>LIST PAYABLES WITH BAL.DUE > 50 AND (PYMT.DATE < 2/1/95 OR
   PYMT.DATE > 2/28/95)
```

Selection expressions can be specified using a shorthand syntax that uses default settings. This makes the selection expression shorter but a little harder to read. The following table shows some examples of the shorthand syntax with longer equivalents. (In this syntax, *op* is any operator keyword, for example, GT or LT.)

Shorthand	Longer Equivalent
op value	**WITH** @ID *op value*
WITH *field*	**WITH** *field* **NE** ""
WITH *field1 field2*	**WITH** *field1 = field2*
WITH NOT *field*	**WITH** *field* = ""
WITH *field op value* **OR** *op value*	**WITH** *field op value* **OR** *field op value*

If you do not specify a field, the search is performed for values in the @ID field.

```
>LIST SUN.MEMBER = 6100
```

This sentence is a terser version of LIST SUN.MEMBER WITH @ID = 6100.

If you do not specify an operator and a value, the criterion NE "" is supplied. It selects any record not having an empty string as the value in the field.

```
>LIST SUN.MEMBER WITH ZIP
```

This sentence is the same as LIST SUN.MEMBER WITH ZIP NE "".

If you specify a field and a value in the selection criteria, but no operator, “equals” is assumed. The following sentence selects records that have a value in the first field that is equal to the second field.

```
>LIST SUN.MEMBER WITH YR.JOIN YR.CANCEL
```

The keyword NOT negates the selection criteria. The following expression selects any record that has an empty string as the value in the specified field.

```
>LIST SUN.MEMBER WITH NOT ZIP
```

This sentence is the same as LIST SUN.MEMBER WITH ZIP EQ "".

Compound expressions have greater flexibility. For instance, in the following sentence you do not have to provide a field name in the second expression, as long as the field name is the same as in the first expression:

```
>LIST SUN.MEMBER WITH ZIP > 44000 AND < 66000
```

If the logical operator AND is omitted, OR is assumed.

WITHIN

Use with RetrieVe commands to RetrieVe one record with all its related subrecords. Its syntax is as follows:

WITHIN *filename* '*record.ID*'

filename is the name of the file.

record.ID is the name of a record that has related subrecords. You can specify only one record ID in a query that uses the WITHIN keyword.

Subrecords provide a further description, or breakdown, of a record—for example, a bill-of-materials record. Subrecords are stored in the same file as the records they depend on.

To make a record a subrecord of another record, store the subrecord's ID as a value in a multivalued field containing subrecord IDs. You can add multiple subrecords to a record by storing their record IDs as multivalues in the subrecord field. And you can nest subrecords by storing their IDs in other subrecords.

Two conditions must be met for the WITHIN keyword to work. First, the record specified by the WITHIN keyword must contain a multivalued field whose values are record IDs (the subrecords). Second, field 6 of the file definition in the VOC file must contain the number of the subrecord field.

Each subrecord encountered is assigned a *level number*. The record ID specified in the WITHIN expression is Level 1. If this record has subrecords, they are assigned Level 2. If Level 2's subrecords have subrecords, they are assigned Level 3, etc., up to a maximum of 20 levels. Level numbers are listed in front of the record and its subrecords.

In this example, the multivalued field SUBREC contains subrecord IDs in the PRODUCT file. The RetrieVe query lists record 801-77 and three levels of subrecords referenced by it.:

```
>LIST WITHIN PRODUCT '801-77' PROD.NO DESC PRICE LOCATION
SUBREC QOH ID.SUP
```

–XREF

Use with the BASIC command to generate a cross-reference table of statement labels and variable names used in the program.

3
User Records

This chapter describes every user record in the default IDEAL UniVerse flavor VOC file. An X in field 1 specifies a user record in the VOC file. User records are sometimes called X-types. The user records are arranged alphabetically with each record starting on a new page. The user record name and a brief definition are at the top of the page, followed by a listing of the record and notes on use. The following sample shows a typical user record reference page.

USER RECORD

Brief description of the user record.

Listing

The format is as follows:

```
        USER.RECORD
001:    X
002:    text
nnn:    text
```

CAPITAL LETTERS indicate the text appears exactly as shown.

Italic indicate the kind of information in the field.

A vertical bar (|) between two elements indicates that either can be included.

Brackets ([ ]) enclose optional text.

Description

This section describes how to use the record and includes any applicable warnings.

Alphabetical Summary of User Records

Table 3-1 lists all user records described in this chapter.

Table 3-1. UniVerse User Records

Record	Description
INTR.KEY	Specifies the options available when the **Intr** (interrupt) key is pressed.
QUIT.KEY	Specifies the options available when the **Quit** key is pressed.
RELLEVEL	Specifies the current UniVerse revision level and account flavor.
STACKWRITE	Specifies whether the sentence stack is saved for the next login session.
SUSP.KEY	Specifies the options available when the **Susp** (suspend) key is pressed.

INTR.KEY is an X record identifying the break options available when you press the **Intr** (interrupt) key.

Listing

```
        INTR.KEY
001:    X
002:    options
```

options is a string of one or more of the characters A, C, D, L, and Q. If you specify only one option, the action associated with that option occurs when you press the **Intr** key.

Description

If you specify more than one option, a message like the following appears when you press the **Intr** key:

```
Break: Option (A,C,L,Q,?) =
```

The user can then select an option. Pressing **?** at the prompt displays the actions of the available options.

A Aborts the current procedure and returns to the system prompt.

C Continues executing the current procedure. You can also continue the current procedure by pressing **Return**.

L Aborts the current procedure and runs the login procedure as specified in the LOGIN paragraph.

Q Aborts the current procedure and exits UniVerse entirely.

D If the user is running a BASIC program, the D option aborts the program and enters the debugger.

You can set and display the **Intr** key with the PTERM (UNIX) or the PTERM (Windows NT) command.

QUIT.KEY

QUIT.KEY is an X record identifying the break options available when you press the **Quit** key.

Listing

```
        QUIT.KEY
001:    X
002:    options
```

options is a string of one or more of the characters A, C, L, and Q. If you specify only one option, the action associated with that option occurs when you press the **Quit** key.

Description

If you specify more than one option, a message like the following appears when you press the **Quit** key:

```
Break: Option (A,C,L,Q,?) =
```

You can then select an option. Pressing **?** at the prompt displays the actions of the available options.

A Aborts the current procedure and returns to the system prompt.

C Continues executing the current procedure. You can also continue the current procedure by pressing **Return**.

L Aborts the current procedure and runs the login procedure as specified in the LOGIN paragraph.

Q Aborts the current procedure and exits UniVerse entirely.

D If the user is running a BASIC program, the D option aborts the program and enters the debugger.

You can set and display the **Quit** key with the PTERM (UNIX) or the PTERM (Windows NT) command.

RELLEVEL is an X record that identifies the revision level of the VOC file.

Listing

```
      RELLEVEL
001:  X
002:  version.number
003:  flavor
```

version.number is the latest version number of the account.

flavor is the UniVerse flavor for which the current VOC file was configured. The BASIC run machine uses this field to determine the account flavor for run-time flavor dependencies.

Description

When you invoke UniVerse, an internal version number is compared to the version number in field 2 of the RELLEVEL. If they are different, UniVerse prints the following message:

```
Your VOC is version [old], update to [new]?
```

If you enter **Y**, the VOC is automatically updated to the latest version (see the UPDATE.ACCOUNT command).

STACKWRITE

STACKWRITE is an X record that indicates whether the sentence stack processor should maintain the sentence stack after you log out.

Listing

```
        STACKWRITE
001:    X
002:    ON | OFF
```

If field 2 of this record contains ON, the sentence stack is saved on logout. If this field contains OFF, the sentence stack is not saved.

SUSP.KEY is an X record identifying the break options available when the user presses the **Susp** (suspend) key.

Listing

```
        SUSP.KEY
001:    X
002:    options
```

options is a string of one or more of the characters A, C, L, and Q. If you specify only one option, the action associated with that option occurs when you press the **Susp** key.

Description

If you specify more than one option, a message like the following appears when you press the **Susp** key:

```
Break: Option (A,C,L,Q,?) =
```

You can then select an option. Pressing **?** at the prompt displays the actions of the available options.

A Aborts the current procedure and returns to the system prompt.

C Continues executing the current procedure. You can also continue the current procedure by pressing **Return**.

L Aborts the current procedure and runs the login procedure as specified in the LOGIN paragraph.

Q Aborts the current procedure and exits UniVerse entirely.

D If the user is running a BASIC program, the D option aborts the program and enters the debugger.

You can set and display the **Susp** key with the PTERM (UNIX) or the PTERM (Windows NT) command.

4

Local and System Files

This chapter describes the local and system files used by UniVerse processes. Each UniVerse account has access to these files. Some of these files are local, that is, they reside in the user's account. Others are system files located in the UV account. The VOC file for each UniVerse account contains pointers to the system files. System files are write protected so that only the UniVerse Administrator can change them.

Local Files	System Files
&COMO&	&DEVICE&
&ED&	&MAP&
&HOLD&	&PARTFILES&
&PH&	APP.PROGS
&SAVEDLISTS&	BLTRS
&TEMP&	DICT.DICT
&UFD&	DICT.PICK
STAT.FILE	NEWACC
USER.HELP	REVISE.PROCESSES
	SYS.HELP
	SYS.MESSAGE
	UNIVERSE.MENU.FILE
	UNIVERSE.STAT.FILE
	UNIVERSE.VOCLIB

&COMO&

Description

&COMO& is a local type 1 file that UniVerse uses to hold command output (COMO) records. You can use the COMO command to save command output in a record in the &COMO& file as it is being displayed on your terminal. The COMO command creates an &COMO& file if one does not exist.

As with any other type 1 file, you can examine the individual records and change them using the Editor. To edit a COMO record, use the following syntax:

ED &COMO& *record*

record is the name you gave the COMO record when you used the COMO command.

To print a COMO record using the SPOOL option with the COMO command, use the following syntax:

COMO SPOOL *record*

Or use the SPOOL command with the following syntax:

SPOOL &COMO& *record*

For more information, see the COMO command.

Description

&DEVICE& is a hashed system file that is used by the ASSIGN command to define the device to be assigned. Each record comprises a device name, a description of that device, and the system filename for the device. You cannot assign a device unless it has an entry in the &DEVICE& file.

The file dictionary of &DEVICE& is shown here to help you interpret the fields of the &DEVICE& file:

```
DICT &DEVICE&    03:13:01pm  12 Jan 1995  Page    1

               Type &
Field......... Field. Field........ Conversion.. Column......... Output Depth &
Name.......... Number Definition... Code........ Heading........ Format Assoc..


@ID            D    0                            DEVICE          10L    S
DESC           D    1                            Description     20T    S
FILE           D    2                            UNIX pathname   25L    S
BLOCK          D    3                            Block           5R     S
                                                 size
TYPE           D    4                            Device          2L     S
                                                 type
LOCK           D    5                            Lock files      25L    M
REWDEV         D    6                            Rewind          25L    S
                                                 device
NREWDEV        D    7                            NoRewind        25L    S
                                                 device
BACKUP         D    8                            cpio-backup     50L    S
RESTORE        D    9                            cpio-restore    50L    S
SKIP           D   10                            Skip            50L    S
                                                 file
REWIND         D   11                            Rewind          50L    S
                                                 tape
OFFLINE        D   12                            Tape            50L    S
                                                 offline
WRITEAT        D   13                            Field 13        1L     S
CLOSE          D   14                            Field 14        1L     S
EOFREAD        D   15                            Field 15        1L     S
IBS            D   16                            Input           6R     S
                                                 Blksize
ROTFLG         D   17                            Rotate          1L     S
                                                 Flag
OPTIONS        I       SUBR(                     sp.config optio 30T    S
                       "*DISP.SP.OPT             ns
                       S", @RECORD )
@              PH      DESC FILE
                       BLOCK TYPE
                       LOCK REWDEV

                       NREWDEV
                       BACKUP
                       RESTORE SKIP
                       REWIND
                       OFFLINE
```

```
                    WRITEAT CLOSE
                    EOFREAD IBS
                    ROTFLG
RESERVED       X    Fields 6 - 16
                    reserved for
                    SP.CONFIG.MNT

21 records listed.

>
```

Description

&ED& is a local type 1 file that stores command sequences that can be used by the Editor during later editing sessions. Several of the commands in the Editor let you save, list, execute, recall, and delete Editor command records in the &ED& file. You must use the CREATE.FILE command to create an &ED& file before storing records in it.

You can create records in the &ED& file by using the Editor .S (Save) command to save commands from the Editor command stack. The following Editor commands manipulate the &ED& file:

.D *name*	Deletes *name* from &ED&.
.L *name*	Lists *name* from &ED&.
.R *name*	Loads *name* from &ED& into the current Editor command stack.
.S *name s e*	Saves lines *s* through *e* from the command stack as *name* in &ED&.
.S *n name*	Saves lines 1 through *n* from the command stack as *name* in &ED&.
.X *name*	Executes the saved command record *name* from &ED&.

name is the record ID of the stored command record in the &ED& file. Here is an example of a record MARK.BLOCK in &ED&:

```
0001: E
0002: <
0003: P 3
0004: >
```

You could execute this command by entering **.X MARK.BLOCK** at the Editor prompt. It would define a three-line block, beginning at the current line.

You can also create and modify records in the &ED& file using the Editor as you would for any other file. If you create a record in the &ED& file using the Editor, you must enter the letter E on line 1. This indicates that the record is an executable Editor command. The rest of the record must consist of valid Editor commands.

To avoid confusion, store only Editor command records in &ED&.

&HOLD&

Description

&HOLD& is a local type 1 file used to hold spooled reports. If &HOLD& does not exist in the account, SETPTR creates it when you use the SETPTR command to set a logical print channel to mode 3. Spooled reports to that channel become records in the &HOLD& file.

Once a report has been sent to &HOLD&, you can edit, delete, or spool the report by using the Editor. The report remains in &HOLD& until you delete it or until another report with the same name is written to &HOLD&.

The dictionary of &HOLD& contains a NEXT.HOLD record, which is an X-type item used by the spooler to create unique print filenames. Field 2 of NEXT.HOLD contains a sequence number from 1 through 9999.

Description

The MAKE.MAP.FILE command builds a hashed UniVerse file called &MAP&. &MAP& contains records that describe the contents of the system catalog space and can be used by RetrieVe for search and retrieval purposes. You can produce reports about the programs in the catalog space, so that you can manage the space better.

Usually the &MAP& file is created in the UV account with remote pointers from other accounts. To create a local &MAP& file in your own account, follow these steps:

1. Delete or change the name of the &MAP& entry in your VOC file.
2. Create &MAP& in your account using CREATE.FILE to create the data file.
3. Change the &MAP& VOC entry to have field 3 point to the file dictionary (D_&MAP&) in the UV account. The &MAP& VOC entry should look something like this:

   ```
   0001: F
   0002: &MAP&
   0003: /u1/uv/D_&MAP&
   ```

4. Use MAKE.MAP.FILE.

The &MAP& file becomes out-of-date as soon as the catalog space is changed by a CATALOG or DELETE.CATALOG command. If you are using &MAP& to assist in managing the catalog space, use MAKE.MAP.FILE immediately before creating a report. By creating a new &MAP& file, you ensure that the information describing the catalog space is current.

&PARTFILES&

Description

&PARTFILES& is a hashed system file used to store records defining a part file that belongs to a distributed file. Each time you use the DEFINE.DF command to define a distributed file, the record for each part file is created in the &PARTFILES& file. The &PARTFILES& file resides in the UV account.

Each part file record in the &PARTFILES& file contains the following:

- The pathname of the file
- A list of VOC records referencing the part file pathname
- A list of corresponding UniVerse account pathnames in which the VOC records reside
- The part number of the part file
- The partitioning algorithm

For more information, see the DEFINE.DF command.

Description

&PH& is a local type 1 file used to store the output produced by a task started with the PHANTOM command. The PHANTOM command starts a background process. PHANTOM automatically creates a &PH& file record every time you start a phantom process. All terminal output produced by the PHANTOM process is stored in the record. You can verify the operation of a phantom process after the process has completed by examining the &PH& file record. You can also edit or spool the &PH& file records.

When you no longer need an &PH& file record, delete it from the &PH& file.

Each record in the &PH& file has a record ID consisting of the following:

verb_time_date

verb is a phantom verb or command. It is taken from a PHANTOM sentence and is the first word of the process to be executed as a phantom task. For example, the record ID is SORT_*time_date* for the following sentence:

```
PHANTOM SORT VENDOR
```

time is generated by the UniVerse BASIC function INT(TIME( )) which produces an integer indicating the time that the process started.

date is generated by the BASIC function DATE( ), the internal date. This suffix guarantees the uniqueness of &PH& file records in an account, even if several users begin the same phantom process at nearly the same time. To ensure unique record IDs, use a SLEEP command between PHANTOM commands.

If &PH& does not exist in the account when you use PHANTOM, the command creates the &PH& file. &PH& is a type 1 file and can be accessed from UniVerse or from your operating system.

&SAVEDLISTS&

Description

&SAVEDLISTS& is a local type 1 file used to store the lists referenced by the SAVE.LIST, EDIT.LIST, GET.LIST, COPY.LIST, MERGE.LIST and DELETE.LIST commands. &SAVEDLISTS& also stores the current sentence stack when you exit UniVerse, and stores the lists created by the VVOC command. Each list is a record in the file.

If you save a list using the SAVE.LIST command, the list name is the name that you specified, or, if you do not specify a name, the list name is &TEMP*port#*&, where *port#* is the terminal number, as displayed by the WHO command.

The VVOC command potentially creates three select lists: &VOC.ONLY, &NEWACC.ONLY, and &VOC.DIFF. These lists are stored in &SAVEDLISTS& and can be retrieved using the GET.LIST command and any other commands that are used with select lists. For a discussion of select lists, see *Guide to RetrieVe*.

When you log out and field 2 of the STACKWRITE entry in your VOC file is ON, the current sentence stack is saved in a list named &&S.*username.port#*. The *username* is your user name, and *port #* is the terminal number. When you log in again from the same port and the same account, this becomes the current sentence stack.

You can use the SAVE.STACK command to save the current sentence stack to the &SAVEDLISTS& file under any name you like. Simply enter the SAVE.STACK command followed by the name you want to save the stack under. Use the GET.STACK command to retrieve any saved sentence stack and load it as the current sentence stack. The previously loaded stack is replaced by the retrieved stack. For more information about sentence stacks, see *UniVerse System Description*.

You can use the UniVerse Editor to examine and change records in &SAVEDLISTS&. If &SAVEDLISTS& does not exist when you use SAVE.LIST, the command automatically creates the type 1 file.

Description

&TEMP& is a local type 1 file used by the VOC update process to store VOC items that are not defined correctly or that conflict with new items of the same name. Each of these items is stored as a record in the &TEMP& file when you use CLEAN.ACCOUNT or when you update your account to a new release. You can examine these items in &TEMP& and decide to keep them or delete them.

If the update process finds an item in your VOC file that has the same name as a new item in the release but has different contents, the process moves the item that already exists in your VOC file to &TEMP& and replaces it with the new item.

You can use the UniVerse Editor to examine the records in &TEMP&.

&UFD&

Description

&UFD& is a type 1 file that is the directory where your UniVerse account is located. Although it is a local file in that it references the local directory, its file dictionary (D_&UFD&) is a system file, located in the UV account. The &UFD& file entry in the VOC allows various UniVerse processes to access files in your current directory. The files in the current directory are accessed as records of the &UFD& UniVerse file. In many cases, normal user-level UniVerse processes such as the Editor, ReVise, or RetrieVe commands cannot produce meaningful results by accessing &UFD& records. You can use the &UFD& file to access ASCII files by specifying the filename as a record in &UFD&. For example:

```
ED &UFD& mbox
```

CLEAN.ACCOUNT is an example of a command that uses the &UFD&. CLEAN.ACCOUNT uses &UFD& to search for filenames that are not defined in the VOC file for that account.

Description

APP.PROGS is a type 1 system file used to store the source of programs that VMARK neither supports nor warrants. The object code for these programs is stored in the corresponding type 1 file, APP.PROGS.O.

BLTRS

Description

BLTRS is a hashed system file that contains the output for the BLOCK.TERM and BLOCK.PRINT commands.

The first field in the BLTRS file is the character width. The second through *n*th records are multivalued fields of the form [B or C]1v2v3v4v5, and so on. B means start with blanks, C means start with the character value you are printing (for example, the letter W is printed using Ws). Each value specifies how many of the characters to print. You alternate printing (B/C) with each multivalued field. The multivalued fields should add up to the character width.

Description

DICT.DICT is a system file dictionary that functions as the master file dictionary for RetrieVe processing of all the other UniVerse dictionaries.

DICT.PICK

Description

DICT.PICK is a system file dictionary that functions as a master file dictionary for RetrieVe processing of all the Pick-style dictionaries.

Description

NEWACC is a hashed system file used to build or update user VOC files. NEWACC comprises multiple data files, one for each flavor account. Each data file is a template for the VOC file of a particular flavor of a UniVerse account, used to create the initial VOC file in a new UniVerse account.

Once a new VOC file has been built in your account from NEWACC, you can add or delete the items that are necessary for your application.

Your UniVerse Administrator can add or delete commands from the NEWACC files to customize them for your particular installation.

When a new release of UniVerse is installed, all existing accounts must be updated. When you enter an account after a new release has been installed, a message is displayed on your terminal asking whether you want to update your account. If you enter yes, the update takes place, and the new information from NEWACC is installed in your VOC file.

New features could duplicate names of entries that you have created in your VOC file. The update process saves these duplicate entries in the &TEMP& file. You can examine the entries in the &TEMP& file and decide about keeping them. (A discussion about the &TEMP& file appears earlier in this chapter.)

REVISE.PROCESSES

Description

REVISE.PROCESSES is a hashed system file that contains the templates used by ReVise in building dictionaries, menus, and selectors for menus.

Description

STAT.FILE is a local hashed file that is used to store the results of the command ACCOUNT.FILE.STATS.

The ACCOUNT.FILE.STATS command with the LOCAL option gathers and stores statistics in the STAT.FILE file.

The LIST.FILE.STATS command with the LOCAL option generates a report of the file statistics stored in the STAT.FILE. This lets you check the efficiency of the selected files all at once instead of issuing an individual command on each file.

SYS.HELP

Description

SYS.HELP is a multilevel data file supplied with UniVerse that contains help text for commands, functions, keywords, and so on. SYS.HELP comprises the following multiple data files:

- BASIC.HELP
- BCI.HELP
- CONV.HELP
- PICK.HELP
- SYS.HELP
- SQL.HELP

Each record in the appropriate SYS.HELP file contains descriptive text for a standard VOC file entry. When you use the HELP command for an item, the SYS.HELP record for that item is displayed. For more information, see the HELP command.

You can also use RetrieVe commands on the SYS.HELP files to provide written documentation of the VOC file entries.

You can create a local help file in your own account. Call the file USER.HELP. See USER.HELP later in this chapter.

Description

SYS.MESSAGE is a hashed system file. The records in the SYS.MESSAGE file contain the UniVerse system messages.

UNIVERSE.MENU.FILE

Description

UNIVERSE.MENU.FILE is a hashed system file. It is the default menu file and contains the menu for creating new menus. You should use the dictionary of this file as the file dictionary for any local menu files you create. To do this, create only the data file and then use the Editor to copy field 3 from the UNIVERSE.MENU.FILE entry:

```
>CREATE.FILE DATA MENU.FILE 3 1 2
Creating file "MENU.FILE" as Type 3, Modulo 1, Separation 2.
>ED VOC MENU.FILE
3 lines long.

----: 3
0003:
Bottom at line 3.
----: D
Bottom at line 2.
----: LOAD UNIVERSE.MENU.FILE
Starting line/field number - 3
Ending   line/field number - 3
0003: /u1/uv/D_MENU.FILE
Bottom at line 3.
----: FI
```

Description

UNIVERSE.STAT.FILE is a hashed system file in the UV account that is used to store the results of an ACCOUNT.FILE.STATS command.

The ACCOUNT.FILE.STATS command gathers and stores statistics in the UNIVERSE.STAT.FILE file.

The LIST.FILE.STATS command with no options generates a default report of the file statistics stored in the UNIVERSE.STAT.FILE in the UV account.

For more information, see STAT.FILE earlier in this chapter.

UNIVERSE.VOCLIB

Description

UNIVERSE.VOCLIB is a hashed system file. It is used to store long commands delivered as standard UniVerse commands that would otherwise appear in the VOC file, to keep the size of the VOC file down and the size of VOC entries relatively uniform. Entries in the VOC file point to paragraphs or procs in the UNIVERSE.VOCLIB file.

Description

USER.HELP is a local help file, similar in use and format to SYS.HELP. USER.HELP can be used to document the VOC file entries that you create. USER.HELP is not supplied with UniVerse, but you can create it using CREATE.FILE.

To create USER.HELP for your account, use the dictionary of the SYS.HELP file and follow the format of the records in the SYS.HELP file. You can either copy the records from the SYS.HELP dictionary to the USER.HELP dictionary, or set up the USER.HELP VOC entry so that it points to the SYS.HELP dictionary in the UV account. Otherwise, the HELP command will not work correctly.

The HELP command first displays the SYS.HELP record. HELP then searches for an item in the USER.HELP file if a USER.HELP file is in your account. If a record is found, it is displayed. USER.HELP can be used to supplement the information in SYS.HELP since both descriptions are displayed when you use HELP.

When creating records in USER.HELP, be sure to use the same format as that used in SYS.HELP.

A

UniVerse Commands Quick Reference

This appendix briefly describes the UniVerse commands described in detail in Chapter 1. The commands are grouped according to use as follows:

- Sentence stack commands
- Redirecting output
- Paragraph commands
- RetrieVe commands
- Creating and manipulating select lists
- Managing UniVerse files
- Managing records
- Managing UniVerse file structures
- Managing secondary indices
- Managing BASIC programs
- Arithmetic commands
- Account commands
- VOC file commands
- Managing menus
- Printer commands
- Terminal commands
- Tape commands
- Managing the system
- Managing locks
- Managing transaction logging

Command descriptions can also be found online in the VOC file.

Sentence Stack Commands

A	Appends text to a sentence.
.C	Changes text in a sentence.
.D	Deletes a sentence from the sentence stack.
.I	Inserts a sentence in the sentence stack.
.L	Lists the sentences in the sentence stack, or lists the contents of a VOC file entry.
.R	Recalls a sentence to the first line of the sentence stack.
.S	Saves sentences in a VOC file entry.
.U	Changes a sentence to uppercase.
.X	Executes a sentence from the sentence stack.
?	(Question mark) Terminates a sentence without executing it.
GET.STACK	Retrieves a sentence stack from the &SAVEDLISTS& file and puts it in the current sentence stack.
SAVE.STACK	Saves the current sentence stack in the &SAVEDLISTS& file.

Redirecting Output

COMO	Manipulates COMO (command output) records.
DIVERT.OUT	Diverts the output of subsequent commands to a record in a type 1 file.
HUSH	Suppresses terminal messages during processing.
REFORMAT	Redirects RetrieVe output to a file or to tape.
SREFORMAT	Redirects RetrieVe output to a file or to tape, with records sorted by record ID.
T.DUMP	Copies files from disk to tape.
T.LOAD	Copies files from tape to disk.

Paragraph Commands

.S	A sentence stack command that saves sentences in a VOC file entry.
*	(Asterisk) Indicates that the text that follows is part of a comment.
<<...>>	Displays a prompt and requests an input value when a sentence is executed.
CLEARDATA	Clears a data stack.
CLEARPROMPTS	Sets the value of in-line prompts to empty strings.
DATA	Specifies a response to input requests.
DISPLAY	Prints a line on the terminal screen.
GO	Transfers execution to a subsequent sentence in a paragraph.
IF	Conditionally executes statements in a paragraph.
LOOP	Defines the beginning of a range of sentences to be repeatedly executed.
REPEAT	Ends a LOOP…REPEAT loop in a paragraph.

RetrieVe Commands

CHECK.SUM	Gets statistical information on values in a particular field for one or more records in a file.
COUNT	Counts the records in a file.
ESEARCH	Creates a select list of records that contain an occurrence of a specified string.
LIST	Searches for and displays data from records in a file.
LIST.ITEM	Displays full listings of selected records.
LIST.LABEL	Displays records in a format suitable for mailing labels and other block listings.
REFORMAT	Redirects RetrieVe output to a file or to tape.
SEARCH	Creates a select list of records that contain an occurrence of a specified string.
SELECT	Creates a list of records that meet specified selection criteria.
SORT	Lists selected records sorted by record ID.

SORT.ITEM	Displays full listings of selected records in sorted order.
SORT.LABEL	Displays items in a format suitable for mailing labels and other block listings.
SREFORMAT	Redirects RetrieVe output to a file or to tape, with records sorted by record ID.
SSELECT	Creates a sorted list of records that meet specified selection criteria.
STAT	Displays numeric statistics for fields in a file.
SUM	Adds numeric values in fields of records that meet specified selection criteria.
T.DUMP	Copies files from disk to tape.
T.LOAD	Copies files from tape to disk.

Creating and Manipulating Select Lists

CLEARSELECT	Clears an active select list.
COPY.LIST	Copies a saved list from the &SAVEDLISTS& file to another file.
DELETE.LIST	Removes a select list from the &SAVEDLISTS& file.
EDIT.LIST	Edits the contents of a saved list.
ESEARCH	Creates a select list of records that contain an occurrence of a specified string.
FORM.LIST	Creates a select list from a record.
GET.LIST	Activates a saved select list.
LIST.DIFF	Compares two saved lists and puts the elements from list one that are not found in list two in a third list.
LIST.INTER	Compares two saved lists and puts the elements from list one that are also found in list two in a third list, without redundancy.
LIST.UNION	Compares two saved lists and puts in a third list the elements from list one followed by the elements from list two that are not found in list one, without redundancy.
MERGE.LIST	Merges two numbered select lists using relational set operations and puts the result in a third select list.

NSELECT	Creates a select list by removing elements from a previously created select list.
QSELECT	Create a select list containing fields of one or more records.
SAVE.LIST	Saves an active select list.
SEARCH	Creates a select list of records that contain an occurrence of a specified string.
SELECT	Creates a list of records that meet specified selection criteria.
SSELECT	Creates a sorted list of records that meet specified selection criteria.

Managing UniVerse Files

CD	Compiles I-descriptors in a dictionary.
CLEAR.FILE	Removes all records in a file.
CNAME	Changes the name of a file or record in any UniVerse file.
COMPILE.DICT	Compiles I-descriptors in a dictionary.
COMPILE.DICTS	Compiles I-descriptors in all dictionaries in an account.
CONVERT.SQL	Converts a UniVerse file to an SQL table.
CREATE.FILE	Creates a UniVerse file.
DEFINE.DF	Defines or modifies a distributed file.
DELETE.FILE	Removes a data file or a file dictionary.
DLIST	Lists I-descriptor object code.
LIST.SICA	Displays SICA information about an SQL table.
REFORMAT	Redirects RetrieVe output to a file or to tape.
SET.FILE	Creates a Q-pointer in the VOC file to a remote file.
SETFILE	Creates a file pointer.
SREFORMAT	Redirects RetrieVe output to a file or to tape, with records sorted by record ID.
VERIFY.SQL	Verifies and fixes SQL catalog inconsistencies.

Managing Records

CLEAR.FILE	Removes all records in a file.
CNAME	Changes the name of a file or record in any UniVerse file.
CONVERT.VOC	Converts Pick or Prime dictionary records to a format compatible with UniVerse.
COPY	Copies records to a file, a printer, or the terminal screen.
COUNT	Counts the records in a file.
CP	Prints a record on the system printer.
CT	Displays a record on the terminal screen.
DELETE	Removes records from a file.
ED	Invokes the UniVerse Editor.
EXCHANGE	Switches the content of two records.
LIST.ITEM	Displays full listings of selected records.
RECORD	Runs a trial hashing of a record in a file.
REVISE	Adds, changes, and deletes file records.
SORT.ITEM	Displays full listings of selected records in sorted order.
SPOOL	Spools records to the printer.
UV.VI	Invokes the UNIX *vi* editor using the file naming syntax. This command is not supported on Windows NT systems.
VI	Invokes the UNIX *vi* editor. This command is not supported on Windows NT systems.

Managing UniVerse File Structures

ACCOUNT.FILE.STATS	Gathers file statistics.
ANALYZE.FILE	Gets information about a dynamic file.
CONFIGURE.FILE	Changes the parameters of an existing dynamic file.
CONVERT.SQL	Converts a UniVerse file to an SQL table.
FILE.STAT	Gets statistical information about a file.

FILE.USAGE	Displays a report of file usage statistics for any hashed file.
FILE.USAGE.CLEAR	Resets the statistics displayed by the FILE.USAGE command for a file.
FORMAT.CONV	Changes storage format of UniVerse files or object code.
GROUP.STAT	Produces a summary of the record distribution for a file.
GROUP.STAT.DETAIL	Gets more information than GROUP.STAT provides.
HASH.AID	Tries one or more file type, modulo, and separation combinations for even record distribution.
HASH.HELP	Determines the most efficient file structure for a file.
HASH.HELP.DETAIL	Gets more information than HASH.HELP provides.
HASH.TEST	Experiments with the file type, modulo, and separation recommended by HASH.HELP or HASH.HELP.DETAIL and produces a summary of the new record distribution.
HASH.TEST.DETAIL	Experiments with a file type and modulo recommended by HASH.HELP or HASH.HELP.DETAIL and produces a detailed summary of the new record distribution, including the size of each group.
LIST.DF	Lists pathnames and part numbers of part files belonging to a distributed file.
LIST.FILE.STATS	Displays file statistics gathered by ACCOUNT.FILE.STATS.
LIST.SICA	Displays SICA information about an SQL table.
REBUILD.DF	Verifies and fixes distributed file inconsistencies.
RECORD	Runs a trial hashing of a record in a file.
RESIZE	Reorganizes a file.
uvfixfile	Verifies and fixes broken files.
UVFIXFILE	Verifies and fixes broken files.
VERIFY.DF	Verifies the pathnames and part numbers of part files belonging to a distributed file.
VERIFY.SQL	Verifies and fixes SQL catalog inconsistencies.

Managing Secondary Indices

BUILD.INDEX	Builds a secondary index for a specified file.
CREATE.INDEX	Creates a secondary index for a file.
DELETE.INDEX	Deletes a secondary index from a file.
DISABLE.INDEX	Disables automatic updating of secondary key indices of a file.
ENABLE.INDEX	Reenables the automatic updating of the secondary key indices of a file.
LIST.INDEX	Displays information about a file's secondary key indices.
SET.INDEX	Changes the characteristics of all the secondary indices in a file.
UPDATE.INDEX	Updates the secondary key indices of a file.

Managing BASIC Programs

BASIC	Compiles a BASIC program.
CATALOG	Catalogs a compiled BASIC program.
CLEARCOMMON	Resets the variables in the common area to zero.
CLEARDATA	Clears a data stack.
DECATALOG	Deletes a locally cataloged program from the VOC file.
DELETE.CATALOG	Deletes programs from the system or local catalog.
FANCY.FORMAT	Formats a BASIC source program.
FORMAT	Formats a BASIC source program.
IAM	Sets the effective account name.
RAID	Debugs a BASIC program.
RUN	Executes a compiled BASIC program.
VCATALOG	Compares BASIC object codes.
VLIST	Lists BASIC object code.

Arithmetic Commands

PRIME	Finds the nearest prime numbers.
RADIX	Converts the number base.

Account Commands

ABORT	Aborts the current process.
ABORT.LOGIN	Aborts the current process and runs the LOGIN paragraph.
ACCOUNT.FILE.STATS	Gathers file statistics.
AUTOLOGOUT	Sets UniVerse to log you out automatically if you have not pressed a key within the specified time.
CHDIR	Switches to another UniVerse directory.
CLEAN.ACCOUNT	Performs account maintenance.
COMPILE.DICTS	Compiles all the dictionaries in an account.
CONVERT.ACCOUNT	Converts a Pick or Prime account from its original format to a format compatible with UniVerse.
CONVERT.SQL	Converts a UniVerse file to an SQL table.
CONVERT.VOC	Converts Pick or Prime dictionary records to a format compatible with UniVerse.
IAM	Sets the effective account name.
INITIALIZE.DEMO	Initializes the demonstration files CUSTOMERS, INVENTORY, and ORDERS.
LIST.FILE.STATS	Displays file statistics gathered by ACCOUNT.FILE.STATS.
LO	Exits UniVerse.
LOGIN	Initializes UniVerse account environment.
LOGOUT	Exits UniVerse.
LOGTO	Moves to another UniVerse account.
LOGTO.ABORT	Moves to another UniVerse account, and aborts the current process.
OFF	Exits UniVerse.
PASSWD	Sets or changes the password for the current account.

QUIT	Leaves UniVerse and returns to where UniVerse was invoked.
UPDATE.ACCOUNT	Updates the contents of the VOC file by replacing records in it with records from the system's NEWACC file.
uvbackup (UNIX) *uvbackup* (NT)	Begins a daily, weekly, or full save of an entire system, or selected directories or files.
uvrestore (UNIX) *uvrestore* (NT)	Restores an entire system, or selected directories, files, or records in UniVerse hashed files saved by *uvbackup*.
WHO	Displays the port number and account name.

VOC File Commands

.L	A sentence stack command that lists the sentences in the sentence stack or the contents of a VOC file entry.
.S	A sentence stack command that saves sentences in a VOC file entry.
CLEAN.ACCOUNT	Performs account maintenance.
CONVERT.ACCOUNT	Converts a Pick or Prime account from its original format to a format compatible with UniVerse.
CONVERT.VOC	Converts Pick or Prime dictionary records to a format compatible with UniVerse.
LISTDOS	Lists DOS commands in the VOC file.
LISTF	Lists files defined in the VOC file.
LISTFL	Lists files stored in this account.
LISTFR	Lists files stored in remote accounts.
LISTK	Lists keywords stored in the VOC file.
LISTM	Lists menu selector records in the VOC file.
LISTO	Lists "other"-type keywords in the VOC file.
LISTPA	Lists paragraphs stored in the VOC file.
LISTPH	Lists phrases stored in the VOC file.
LISTPQ	Lists proc commands in the VOC file.
LISTR	Lists remote commands in the VOC file.
LISTS	Lists stored sentences in the VOC file.

LISTSL	Lists verbs stored in the VOC file that use a select list.
LISTUN	Lists UNIX commands in the VOC file.
LISTV	Lists verbs stored in the VOC file.
SET.FILE	Creates a Q-pointer in the VOC file to a remote file.
SETFILE	Creates a file pointer.
UPDATE.ACCOUNT	Updates the contents of the VOC file by replacing records in it with records from the system's NEWACC file.
VVOC	Verifies the contents of the VOC file by comparing it to the system's NEWACC file.

Managing Menus

MENU.DOC	Produces a menu listing that shows selection text, explanations, and the actual sentence, paragraph, or menu that is executed for each selection.
MENU.PIX	Prints an image of the menu on the system printer.
MENUS	Creates, updates, and maintains menus.
MOTIF	Displays a UniVerse menu in Motif format.

Printer Commands

ASSIGN	Assigns a device for exclusive use.
BLOCK.PRINT	Prints block characters on the printer.
CP	Prints a record on the system printer.
P.ATT	Requests control of a printer.
P.DET	Releases the printer from control.
PRINT.ADMIN	Invokes the print spooler queue administration menu. This command is not supported on Windows NT systems.
SETPTR	Sets line printer spooler options.
SETPTR.DEFAULT	Changes the default values used by the SETPTR command over the entire system.
SP.ASSIGN	Sets the line printer spooler options for each of the 256 logical print channels.

SP.EDIT	Selects held spool files from the spool queue and sends them to the terminal or the printer.
SP.TAPE	Prints a report stored on a spooled tape.
SPOOL (UNIX) SPOOL (NT)	Spools records to the printer.
TERM	Sets printer and terminal characteristics.
UNASSIGN	Releases control of a device.
usa	Administers the UniVerse spooler from a UNIX shell. This command is not supported on Windows NT systems.
usd	Starts the UniVerse spooler from a UNIX shell. This command is not supported on Windows NT systems.
usm	Changes print job characteristics from a UNIX shell. This command is not supported on Windows NT systems.
usp	Sends print jobs to the UniVerse spooler from a UNIX shell. This command is not supported on Windows NT systems.

Terminal Commands

BELL	Disables or reenables the terminal bell on warning messages.
BREAK	Enables or disables **Intr** (interrupt), **Stop**, **Susp** (suspend), and **Break** keys.
CLR	Clears the terminal screen.
CS	Clears the terminal screen.
GET.TERM.TYPE	Displays terminal type.
PTERM (UNIX) PTERM (NT)	Sets and displays terminal characteristics.
SET.TERM.TYPE	Sets the terminal type.
TERM	Sets printer and terminal characteristics.
WHO	Displays the port number and account name.

Tape Commands

ASSIGN	Assigns a device for exclusive use.
T.ATT	Assigns control of a tape drive.
T.BCK	Backs up records on a tape.
T.DET	Gives up control of the tape drive.
T.DUMP	Copies files from disk to tape.
T.EOD	Advances a tape to the end-of-data mark.
T.FWD	Advances records on a tape.
T.LOAD	Copies files from tape to disk.
T.RDLBL	Reads a tape label at the beginning of a reel.
T.READ	Reads and displays a tape record.
T.REW	Rewinds a tape to the load point.
T.SPACE	Advances a specified number of files on the tape or to the end-of-file mark.
T.UNLOAD	Rewinds and unloads tape.
T.WEOF	Writes an end-of-file mark on tape.
T.WTLBL	Writes a tape label in a format compatible with a Pick or REALITY system.
UNASSIGN	Releases control of a device.

Managing the System

ABORT	Aborts the current process.
ABORT.LOGIN	Aborts the current process and runs the LOGIN paragraph.
ANALYZE.SHM	Displays information about disk and printer shared memory segments.
AVAIL	Displays statistics about disk records.
BREAK	Enables or disables **Intr** (interrupt), **Stop**, **Susp** (suspend), and **Break** keys.
CHAP	Changes priority level for tasks.
CONFIG	Displays active authorization parameters and current tunable parameter values.

CORE	Displays statistics about your current memory usage. This command is not supported on Windows NT systems.
CSH	Invokes a UNIX C shell (*csh*). This command is not supported on Windows NT systems.
DATE	Displays the current day, date, and time on the terminal.
DATE.FORMAT	Changes the date format from American to international format.
DOS	Invokes a DOS command window. This command is not supported on UNIX systems unless you use a suitable emulator.
ENVIRONMENT	Sets and displays environment variables.
HELP	Gets a description of a UniVerse command or a BASIC statement or function.
JOBS	Lists active phantom processes.
LIMIT	Sets system limits.
LISTME	Displays the status of everybody logged in to your account.
LISTU	Displays the status of users on the system.
LOGON	Starts up a phantom process. This command is not supported on Windows NT systems.
MAIL	Invokes the UNIX mail processor. This command is not supported on Windows NT systems.
MAKE.MAP.FILE	Creates a map file of the system catalog space.
MAP	Displays the contents of system catalog space.
MESSAGE	Sends a message from your terminal to another user.
NOTIFY	Sets notification delay.
PAGE.MESSAGE	Suppresses the message `Press any key to continue...` at the end of paged reports.
PASSWD	Sets or changes the password for the current account.
PHANTOM	Starts a phantom process.
PORT.STATUS	Lists currently active UniVerse jobs.
PTIME	Displays system usage in the current terminal session.
SET.REMOTE.ID	Defines a user name and password to use for access to files on a remote UniVerse system.

SETPTR.DEFAULT	Changes the default values used by SETPTR over the entire system.
SH	Invokes a UNIX Bourne shell (*sh*). This command is not supported on Windows NT systems.
SLEEP	Suspends a process.
STATUS	Displays information about users and resources.
TANDEM	Watches the input and output displayed on another user's terminal from your terminal. This command is not supported on Windows NT systems.
TIME	Displays the current system date and time on your terminal.
UMASK	Sets default file permissions.
USERS	Displays the number of users currently logged in to the system.
uvbackup (UNIX) uvbackup (NT)	Begins a daily, weekly, or full save of an entire system, or selected directories or files.
UVPROMPT	Changes the command-line prompt character, the select-list-active character, and the line-continue character.
uvrestore (UNIX) uvrestore (NT)	Restores an entire system, or selected directories, files, or records in UniVerse hashed files saved by *uvbackup*.
WHO	Displays the port number and account name.

Managing Locks

CLEAR.LOCKS	Clears task synchronization locks.
LIST.LOCKS	Displays the status of task synchronization locks.
LIST.READU	Displays the status of locked records.
LOCK	Sets task synchronization locks.
MASTER	Releases task synchronization locks.
RELEASE	Unlocks records.
SEMAPHORE.STATUS	Displays the status of system semaphores. This command is not supported on Windows NT systems.
UNLOCK	Clears file, group, and READU locks.
UNLOCK SEMAPHORE	Clears system semaphores. This command is not supported on Windows NT systems.

Managing Transaction Logging

ACTLIST	Activates files for transaction logging.
CREATE.LDIR	Creates the log directory for the transaction logging system.
CREATE.LFILE	Creates log files in the transaction logging log directory.
DEACTLIST	Deactivates files for transaction logging.
DEL.RFILE	Deletes a series of log files that have been restored and rolled forward.
DELETE.LFILE	Deletes empty log files from the transaction logging log directory.
ENABLE.RECOVERY	Enables the transaction logging system.
LOG.RESTORE	Restores transaction logging log files from tape to disk.
LOG.SAVE	Saves transaction logging files from disk to tape.
MKFILELIST	Creates a list for files to activate for transaction logging.
RECOVERY.CHECKPOINT	Finds the numbers of the first and last log files needed for a rollforward recovery.
RECOVERY.CONSISTENT	Clears the flag that indicates a file is in an inconsistent state.
RELEASE.LFILE	Releases a transaction logging log file for reuse.
SET.LOG.ATTR	Sets or changes the transaction logging operating mode.
SHUTDOWN.RECOVERY	Disables the transaction logging system.
SUSPEND.RECOVERY	Suspends the transaction logging system.

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